DOCUMENT RESUME

ED 093 119 EC 062 208

AUTHOR	White, Alan J., Ed.; Lanza, Leonard G., Comp.
TITLE	Identification of the Gifted and Talented: Report of the Connecticut Task Force on Identification. Working Draft.
INSTITUTION	Connecticut State Dept. of Education, Hartford. Bureau of Pupil Personnel and Special Education Services.
PUB DATE	Jun 74
NOTE	144p.; For related reports see EC 062 206 and EC 062 207
EDRS PRICE	MF-$0.75 HC-$6.60 PLUS POSTAGE
DESCRIPTORS	Ability Identification; Annotated Bibliographies; *Disadvantaged Youth; *Exceptional Child Education; *Gifted; *Identification; Screening Tests; State Programs; Talent Identification; Testing
IDENTIFIERS	Artistically Talented; *Connecticut

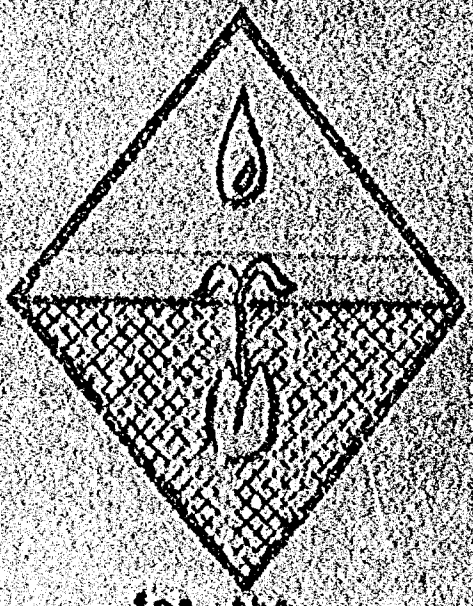
ABSTRACT

The report (in working draft form) of the Connecticut Task Force on Identification of the Gifted and Talented discusses general systems and instruments of identification, identifying the academically gifted, identifying the disadvantaged gifted, and identifying special types of giftedness. Excerpts from Connecticut State Department of Eduation publications are provided to show the broadened conception of giftedness includes a wide spectrum of intellectual aptitudes and abilities such as creativity and talent in the graphic and performing arts. The section on general systems and instruments describes possible screening and selection sequences, gives samples of rating scales and checklists which can be incorporated into identification systems, and summarizes the results of a study on the development of an evaluation procedure to identify gifted children in one Connecticut district. Definitions and characteristics of the academically gifted child are discussed. Reviewed is the literature on the identification of gifted children from disadvantaged backgrounds, and included are two papers on evaluating talent potential in the disadvantaged. Offered are suggestions for identification procedures in the special areas of the performing arts, creative thinking abilities, and independent study. Final sections include an annotated bibliography of approximately 50 standardized identification instruments and a bibliography on identification of approximately 50 items. (DB)

REPORT OF THE TASK FORCE ON:

IDENTIFICATION

CONNECTICUT PROGRAMS



for the GIFTED & TALENTED

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Bureau of Pupil Personnel and Special Educational Services
Hartford, Connecticut

IDENTIFICATION OF THE GIFTED AND TALENTED

REPORT OF THE CONNECTICUT TASK FORCE ON IDENTIFICATION

(WORKING DRAFT)

Supervised and Administered by
WILLIAM G. VASSAR
Consultant for Gifted and Talented
Connecticut State Department of Education

Edited by
ALAN J. WHITE
Director of Task Forces on Gifted and Talented
Administrative Assistant
Connecticut State Department of Education

Compiled by
LEONARD G. LANZA
Chairman of Task Force on Identification
Principal, Tariffville School
Director of Gifted Programs
Simsbury Public Schools

Task Force Members

ROSALIE BENNY Hartford Public Schools
MARGARET CINCI New Britain Public Schools
WILLIAM COLLINS Hamden Public Schools
IRENE DOWD Ellington Public Schools
MARY FRASIER University of Connecticut
PATRICK HOWLEY Farmington Public Schools
LYNNE NIRO Bloomfield Public Schools
BARBARA PEROTTA Canton Public Schools
LEO SALVATORE Simsbury Public Schools
HAZEL SCHOONMAKER Avon Public Schools

CONNECTICUT STATE DEPARTMENT OF EDUCATION
BUREAU OF PUPIL PERSONNEL AND SPECIAL EDUCATIONAL SERVICES
HARTFORD, CONNECTICUT

JUNE, 1974

FOREWORD

This report represents the culmination of the efforts of a large number of people to meet the needs of professional personnel involved in the identification of the gifted and talented in Connecticut.

For the most part, the work of writing and compiling this booklet was done by teachers and administrators in gifted programs in the state. They accomplished this task in a matter of a few short months, meeting afternoons and evenings on their own time. In addition to doing research and writing articles, the task force leader and members have attempted to bring together the best information from a wide variety of sources. Much credit belongs to individuals and agencies from outside Connecticut who have been kind enough to give us permission to reprint some of their materials.

This report is a preliminary working draft and is subject to further revision. We welcome all comments and suggestions for improvement, since your responses will provide valuable input in the preparation of the final draft. Please address all correspondence to William G. Vassar, Box 2219, Connecticut State Department of Education, Hartford, Connecticut, 06115.

We wish to extend our personal thanks to all who have worked so hard to produce this report in the interest of the gifted and talented children of Connecticut.

WILLIAM G. VASSAR
Consultant for Gifted and Talented
Bureau of Pupil Personnel and Special Educational Services

ALAN J. WHITE
Administrative Assistant
Bureau of Pupil Personnel and Special Educational Services

PREFACE

The process of identifying gifted and talented children does not have to be mysterious and complex. Unfortunately, however, it appears that it often times is.

In the Report to the Congress of the United States by the U. S. Commissioner of Education (March, 1972), it was stated:

> "Identification of the gifted and talented in different parts of the country has been piecemeal, sporadic, and sometimes nonexistent. Very little identification has been carried on in depth, or with appropriate testing instruments. Many of the assumptions about giftedness and its incidence in various parts of the American society are based on inadequate data, partial information, and group tests of limited value. The United States has been inconsistent in seeking out the gifted and talented, finding them early in their lives, and individualizing their education. Particular injustice has occurred through apathy toward certain minorities, although neglect of the gifted in this country is a universal, increasing problem."

Now that we know where we are, the question must be, "Where are we going?" Do we follow the path of the 58 percent of all U. S. schools who, when surveyed in 1969-70, said they had no gifted students, or dare we dream the impossible dream -- 100 percent of U. S. schools identifying and providing for their gifted students? Do we follow the hostile, indifferent, apathetic, and ignorant, or do we thrust ourselves forward with the expectation that some scars will result? Do we do what is easy or what we know is right?

It was not the intent of this task force to provide people with answers to all of the questions regarding identification. Given a limited period of time (2 months) and limited expertise in the area of gifted and talented child education, it has been necessary to draw from the works of others. Rather, it is our intent to provide you with ideas, suggestions, examples of materials, and, hopefully, a bit of enthusiasm to share our dream -- to do what we know is right.

Much has been done. Much remains to be done. If, as a result of the operation of this task force, one more school system meets the challenge of providing for its gifted and talented students, our existence has been justified and our job has been worthwhile.

Leonard G. Lanza

ACKNOWLEDGEMENTS

Many thanks to the individuals and groups who have given so generously of their time and expertise in the preparation of this publication:

Dr. Barbara Bard, Central Connecticut State College, and Dr. Randolph Nelson, University of Bridgeport, for the willing support and encouragement they gave to members of this task force

Dr. Joseph Renzulli, University of Connecticut, and Dr. Catherine Bruch, University of Georgia, for allowing us to incorporate their valuable articles

The California State Department of Education, The Dade County, Florida Department of Education, Exceptional Children magazine, and the Council for Exceptional Children for granting us permission to reprint materials from their publications

Capitol Region Education Council and especially Charles Haller and Virginia Wells for their assistance since the inception of the project and for the smooth handling of the publication of this report.

TABLE OF CONTENTS

INTRODUCTION

Both conceptually and chronologically, one of the foremost concerns in designing programs for the gifted and talented is the identification of the children who will participate in the program. No single identification scheme is without its shortcomings, nor is any one design appropriate for the identification of every type of gift and talent. What is needed is a variety of measures, both objective and subjective, which will support and supplement one another.

Connecticut legislation and administrative guidelines are based on a broadened conception of giftedness -- one which views traditional academic ability as one ability within a wide spectrum of intellectual aptitudes and abilities, including creativity and talent in the graphic and performing arts. The law also encourages educational agencies to identify underachievers and those students who have the potential for high achievement, even though they may not be demonstrating exceptional achievement in their current educational setting. To locate students with these various abilities, it is probably wise to utilize a combination of both standardized instruments and the expert judgment of professionals.

It is the intent of this booklet to present in one convenient volume the most relevant and practical information available on the identification process, ranging from very broad screening and selection sequences to specific procedures and instruments for locating talent in a variety of areas. Along with general recommendations, there will also be found a number of rating scales and checklists that have been used successfully to identify gifted and talented students. Finally, there is a listing of commercially available instruments and a selection of books and articles to guide the interested reader.

It is hoped that the use of this booklet will facilitate efficient and effective identification procedures and remove some of the mystery and misunderstanding surrounding this critically important phase in the development of programs for the gifted and talented.

I. EXCERPTS FROM CONNECTICUT STATE DEPARTMENT OF EDUCATION PUBLICATIONS: IDENTIFICATION OF GIFTED AND TALENTED STUDENTS

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Bureau of Pupil Personnel and Special Educational Services
Hartford, Connecticut

METHODS OF DISCOVERY AND IDENTIFICATION OF THE TOTAL POPULATION OF GIFTED YOUTH AND METHODS OF ASSESSING THE INDIVIDUAL NEEDS OF THESE CHILDREN

The basic problem in special education for the gifted and talented is that of defining the population of children and youth for whom special services, provisions, and programs will be made.

The literature in this area of special education offers a plethora of definitions and characteristics which attempt to describe the qualities of gifted and talented children and youth. Because professional educators have not agreed on a definition of terms, the recent U.S.O.E. Commissioners' Report to the Congress has established a rather open-ended definition for the purposes of Federal education programs. Such definition will serve as a point of reference for our purposes:

> Gifted and talented children are those identified by professionally qualified persons who by virtue of outstanding abilities, are capable of high performance. These are children who require differentiated educational programs and/or services beyond those normally provided by the regular school program in order to realize their contributions to self and society.

Children capable of high performance include those with demonstrated achievement and/or potential ability in any of the following areas, singly or in combination:

1. general intellectual ability
2. specific academic aptitude
3. creative or productive thinking
4. leadership ability
5. visual and performing arts
6. psychomotor ability
7. disadvantaged potential

It may be assumed that utilization of these criteria for identification of the gifted and talented will encompass a minimum of 3 to 5 percent of the school population.

Evidence of gifted and talented abilities may be determined in a multiplicity of ways. These screening and identification procedures should include objective measures and professional evaluation measures which are essential components of such procedures.

Professionally qualified persons include such individuals as teachers, school administrators, psychologists, counselors, curriculum specialists, artists, musicians, and others with special training who are also qualified to appraise pupil's special competencies.

Generally, evidence of intellectual and creative talent may be determined in many ways including:

.. Consistently very superior scores on a number of appropriate standardized tests.

.. Judgment of teachers, pupil personnel specialists, administrators, and supervisors who are familiar with the demonstrated and/or potential abilities of the individual.

.. Evidence of advanced skills, imaginative insight and intense interest and involvement.

.. Judgments of specialized teachers (i.e., art and music), pupil personnel specialists and experts in the arts who are qualified to evaluate the pupils' demonstrated and/or potential talent.

Can we identify the gifted and talented? The answer to such a question covers several factors: age of identification, screening procedures and test accuracy, the identification of children and youth from different ethnic groups and cultures, underachievers, and tests of creativity. The total problems of screening and identification are complicated by assumptions that talents cannot be found as abundantly in certain groups as among the affluent. These assumptions may be overemployed to produce meager searches and identification.

Meantime, ample evidence exists that the gifted and talented can be identified in all groups within society. For example, the intensive search for disadvantaged potential and appropriate programs are tasks presently being tackled by such people as Drs. Bruch and Torrance at the University of Georgia, Dr. Renzulli at the University of Connecticut and Dr. Sisk of the University of South Florida.

For those charged with the development of identification procedures for the many target groups among the gifted and talented, it must be remembered that discovery of talent is a continual process that must begin early and continue late in a child's career through the educational system.

All along the continuum provisions should be made to include formal appropriate standardized testing at regular intervals, but more important observation by professional and lay personnel on a regular, orderly and concerted effort to assess and record the childs' manifest achievements or potential achievements in areas not covered by the standard measures.

Professional personnel must learn to feel comfortable with the idea that measurement of student performance does not reside in "objective" paper and pencil tests and that, indeed, the measurement of all human behavior is ultimately rooted in subjective judgment. The most important task is to make these judgments as good and reliable as possible.

William G. Vassar, Consultant for Gifted and Talented
March, 1974

EXCERPTS FROM

POLICIES, PROCEDURES AND GUIDELINES

FOR

GIFTED AND TALENTED PROGRAMS

UNDER

SECTION 10-76 OF THE GENERAL STATUTES
(SPECIAL EDUCATION LEGISLATION)

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Bureau of Pupil Personnel and Special Educational Services
Hartford, Connecticut

William G. Vassar, Consultant for Gifted and Talented

SUMMARY OF LEGAL PROVISIONS

Section 10-76 of the Connecticut General Statutes makes it permissive for local and regional school districts to provide reimbursable special instructional and supportive services for pupils with extraordinary learning ability and/or outstanding talent in the creative arts. The town or regional board of education may do this individually or in cooperation with other school districts.

To be reimbursable, plans for providing such special education must be approved in advance by the State Department of Education. Reimbursement based on an excess cost concept is explained in Section VII of the 1973/74 General Guidelines for Special Education Programs.*

DEFINITIONS OF TERMS

"Extraordinary learning ability" is deemed to be the power to learn possessed by the top five per cent of the students in a school district as chosen by the special education planning and placement team on the basis of (1) performance on relevant standardized measuring instruments or (2) demonstrated or potential academic achievement or intellectual creativity.

"Outstanding talent in the creative arts" is deemed to be that talent possessed by the top five percent of the students in a school district who have been chosen by the special education planning and placement team on the basis of demonstrated or potential achievement in music, the visual arts or the performing arts.

IDENTIFICATION PROCEDURES

The responsibility for the identification of eligible pupils rests with the superintendent of schools or an employee of the school district to whom he may delegate this responsibility. Such identification should be based on a study of all available evidence as to the pupil's ability and potential made by personnel qualified to administer and interpret appropriate standardized tests, judge demonstrated ability and potential, and recognize outstanding talent in the creative arts.

Evidence as to a pupil's extraordinary learning ability and/or outstanding talent in the creative arts must be satisfactory to the Secretary of the State Board of Education.

*General Guidelines for Special Education Programs - Section 10-76a-10-76j of the General Statutes. State Department of Education, Bureau of Pupil Personnel and Special Educational Services, Hartford, Connecticut. 1973.

Items of evidence in the intellectual category should include:

A. Very superior scores on appropriate standardized tests. Criteria for "very superior" might be the upper two or three percent of an appropriate criterion group or scores which are at least two standard deviations above the mean.

B. Judgments of teachers, pupil personnel specialists, administrators and supervisors who are familiar with the pupil's demonstrated and potential ability.

Additional items of evidence used in the creative arts category should include:

A. Evidence of advanced skills, imaginative insight, intense interest and involvement.

B. Judgments of outstanding talent based on appraisals of specialized teachers, pupil personnel specialists, experts in the field and/or others who are qualified to evaluate the pupil's demonstrated and potential talent.

The procedures have been designed to avoid arbitrary cut-off points or limitations. The identification process should identify a small percentage of pupils with extraordinary ability and outstanding talent whose needs are such that they cannot be met in the regular school program. (Please refer to Appendix A of this publication for further information on potential sources of identification criteria).

APPENDIX A

POTENTIAL SOURCES OF MULTIPLE CRITERIA FOR IDENTIFYING THE GIFTED AND TALENTED

The key to a successful identification system is to design an integrated procedure which combines a variety of objective and judgmental measures for screening and selecting students for a special program. The following list is intended to suggest in a general way some possible sources of criteria for identifying gifted and talented students. Naturally, it is expected that the identification procedure would fit the intended program and not attempt to utilize every type of measure noted below.

INTELLECTUAL AREAS: (Evaluation in these areas may include both demonstrated and potential ability).

A. Standardized tests
- Intelligence Tests
  - Group
  - Individual
- Achievement tests
- Specific aptitude tests, including creativity tests
- Personality measures
- Interest inventories

B. Judgmental evidence
- School grades
- Teacher rating scales and checklists
- Observations and anecdotal reports
- Parent interviews; student interviews
- Pupil product evaluation
- Nominations by teachers and other school personnel
- Peer nomination; self-assessment

CREATIVE ART AREAS: (Identification in these areas will depend almost entirely on subjective, judgmental evidence).

A. Evidence of advanced skills, imaginative insight, intense interest and involvement may be gathered by any of the methods suggested under Part B above, and can also include interest inventories and specific aptitude measures.

B. Judgments of outstanding talent based on appraisals of specialized teachers, pupil personnel specialists, professional artists and experts in the field and/or others who are qualified to evaluate the pupil's demonstrated or potential talent. These judgments may be based on performance auditions, portfolio or product evaluation, or situational assessments.

II. GENERAL SYSTEMS AND INSTRUMENTS:

A. SCREENING AND SELECTION SEQUENCES

PROJECT IMPROVE

System for Identifying Gifted and Talented Students

Joseph S. Renzulli, 1971

The purpose of this system is to provide persons who are involved in the identification of gifted students with a comprehensive plan that will assist them in both the screening and the selection process. The system is designed (1) to take account of a variety of identification criteria, (2) to minimize the amount of individual testing required, and (3) to show a relationship between the objectives of the program and the criteria upon which selection is based. The steps involved in identification should take place in the Spring of the year before students are placed in the program. For students who are continuing in the program, the same procedure should be followed; however, test data should be updated and information should be obtained from special program teachers who have worked with the students during the preceding year. Screening and selection should be carried out by a committee consisting of teachers, administrators, and pupil personnel specialists.

Before the screening and selection system can be implemented the following three decisions should be made:

1. How many students will be involved in the program?
2. What area or areas will the program focus upon? (Language Arts, Science, etc.)
3. From what grade levels will the students be selected?

Once these basic program decisions have been made, the following steps should be followed:

PART I: SCREENING

Step A: Intelligence Test Information

Section A of the Screening and Selection Form should be completed for all students who are in the grade(s) below the grade(s) from which students will be selected for the program. In the very early stage of the screening process, all youngsters in these grades should be considered eligible for the program. This approach will minimize the chances of overlooking youngsters who do not earn a high evaluation on any one criterion, but who may be good candidates for the program when several criteria are looked at collectively. Each step in this identification system will be directed toward reducing the number of students who are eligible for the program.

If the program deals mainly with one or more of the traditional academic areas, a minimum group intelligence test score should be established. Any student who has scored at or above this cut-off point on any of his group intelligence tests should be continued in the screening process. A rationale for establishing this cut-off point might be as follows:

1. Decide how many students the program can accommodate and determine what proportion of the eligible students this figure represents.

Example: $\frac{\text{program can accommodate} = 300}{\text{No. of Students Eligible} = 3000} = 10\%$

2. Determine the observed means and standard deviations for intelligence scores for each grade level.

Example: 4th Grade mean for 1000 students = 105,
S.D. = 12
5th Grade mean for 1000 students = 100,
S.D. = 15
6th Grade mean for 1000 students = 95,
S.D. = 18

3. Refer to a table of proportions under the normal distribution curve and determine the Z-value that marks off the top 10 per cent of a normal population.

Example: 10% of a normal population falls above a Z-value of 1.28.

4. Determine the cut-off scores by (a) multiplying the Z-value by the observed standard deviations, and (b) adding these figures to the observed means.

Example: The top 10% in 4th Grade will earn a score of 120.36 or better
1.28 x 12 = 15.36
15.36 + 105 = 120.36
5th Grade = 119.26
6th Grade = 118.04

Because of errors in measurement that are inherent in group measures, and because some youngsters simply do not demonstrate their best performance in group testing situations, an individual intelligence test should be administered to all students who score five or less points below the group test cut-off

score. Because of the cultural inequalities in intelligence tests, minority group students and students coming from low socioeconomic backgrounds who score 15 or less points below the cut-off score also should be given an individual test. Since individual intelligence tests are also culture bound, the subjective judgment of the psychologist should be used in interpreting test performance for minority group and low socio-economic youngsters.

Scores from intelligence tests should rarely, if ever, be used as the only criteria for admission to a program for the gifted. This is especially true if the program focuses upon the development of non-academic talents such as art, music, leadership, drama, and creativity. If the program does focus on one or more of the traditional academic areas, students with unusually high scores can usually be recommended for the program without further consideration of additional information. With the exception of students who are unusually low in intelligence, a good rule to follow is THAT NO CHILD SHOULD BE EXCLUDED FROM THE PROGRAM SOLELY ON THE BASIS OF INTELLIGENCE TEST RESULTS.

If the program deals with developing the creative potential which is present in all youngsters, or with special aptitudes and talents such as music, mechanics, drama, etc., Steps A and B should be skipped and screening and selection should focus on Steps C, D, and E.

Action based on Step A

After all intelligence information has been gathered for students who are eligible for a program that deals with one or

more of the traditional academic areas and cut-off points have been established, the following decisions can be made:

1. Students who score ten or more points above the cut-off score should be recommended for placement in the program.

2. Students who score ten or more points below the cut-off score should not be recommended for placement in the program.

3. All other students should be continued in the screening process.

Step B: Achievement Information

If the program deals with one or more of the traditional academic areas, Section B of the Screening and Selection Form should be completed for all eligible students who have been continued in the identification process. Section B points out each student's best area(s) of performance, and this information should be carefully considered when the program focuses on a particular academic area. For example, if the program is designed to develop advanced levels of proficiency in science, then special consideration should be given to students who have demonstrated high performance in this area. If a variety of special program offerings are available, but space or scheduling problems prohibit enrollment in more than one area, student interest should be respected, and, if necessary, interviews with a guidance counselor should be arranged to help students clarify their interests.

At this point, the screening and selection committee should have a fairly good idea about which students are the

best achievers, but whenever there is some doubt about a student's past performance, the information required in Step C should be gathered.

Special consideration should be given to students who score unusually high on intelligence tests, but who display poor performance on achievement tests and/or course grades. These youngsters may be bored by a curriculum which has failed to challenge their superior abilities, and this lack of challenge sometimes causes them to be discipline problems in the regular classroom. A special program may be the best way to renew these students' interest in learning.

Action Based on Step B

Because of variations in student motivation, different standards in grading practices, and the frequent lack of relationship between course content and standardized achievement tests, decisions based on Step 2 should be approached with great caution. Whenever there is any doubt about a student's motivation and ability to accomplish work in the special program the additional information suggested in Step C should be gathered. With these cautions in mind, the following action might be based on Step B:

1. Students who have unusually high achievement in the area(s) with which the special program will deal should be recommended for placement.

2. Students with unusually low achievement should not be recommended for placement (note above caution about students who have high intelligence scores but low achievement test scores and/or course grades). Students who are eliminated

at this step may be nominated later as a special recommendation.

3. All other students should be continued in the screening process.

Step C: Teacher Judgment

A Scale for Rating the Behavioral Characteristics of Superior Students (SRBCSS) should be completed for all students who have not yet been selected for the program. This scale was designed to serve as a guide for teacher judgment in the areas of learning, motivation, creativity, and leadership. The scores from this scale should be recorded in Section C of the Screening and Selection Form. The mean scores of the four separate scales of the SRBCSS should be computed and the comments of teachers should be carefully considered.

Action Based on Step C

1. Students with the highest scores on the SRBCSS or other rating scales should be considered for placement in the special program.

2. Remaining students should not be recommended for placement unless they are nominated in Section D.

Step D: Special Nominations

After a final list has been compiled, the list should be circulated to teachers from the sending classes and they should be allowed to make special nominations for any students who are not on the list but who they feel should be given further consideration. Teachers should meet with the screening and placement committee and be given an opportunity to make a case for their special nominations. Whenever a child

is not placed in the special program, a brief statement which summarizes the reasons for not being placed should be sent to the teacher who nominated the child.

Step E: Special Aptitudes and Talents

Whenever a program deals with the development of special aptitudes and talents, the screening and selection process should show a close relationship between the ability being developed and the criteria which are used for identification. In other words, if the program is mainly directed toward the development of general creativity, then tests of this aptitude should be given primary consideration in the identification process. If the program deals with the development of talents such as art, drama, or music, then persons who are qualified to make judgments in these areas should conduct auditions and/or review samples of students' work. Because of the limited number of objective instruments for measuring various kinds of talents in the fine arts, a good deal of the criteria for selection in these areas will have to depend on the subjective judgment of experts. Some instruments are available for measuring specific abilities such as mechanical aptitude, judgment for design, physical dexterity, etc., and current listings of instruments in these areas should be reviewed as a possible source of identification criteria.

PART II: SELECTION

At the conclusion of Step D (or Step E if the program deals with special aptitudes or talents), the Summary box on the first page of the Screening and Selection Form should be completed and all students who have been recommended in one of the screening steps should be reviewed by the screening and selection committee. In most cases, the list of students recommended for the program will exceed the number of students that the program can accommodate, and the major task in selection will be to trim the list down to the desired number. In addition to certain practical considerations such as balance between boys and girls, geographic locations of students, scheduling, etc., some general guidelines can be used to assist in making the final decisions.

The most important consideration is to achieve a balance among the various types of students who have been recommended. A good idea is to arrange the groups in such a way that they contain some high IQ students, some high achievers, and some students who have received high ratings in motivation, creativity, and leadership. This approach may cause the committee to eliminate some high IQ or high achievement students in favor of students who are lower in these abilities but high in characteristics that will be important to the overall functioning of the group. The result will be a more heterogeneous group that can profit from each other and that can engage in activities that require a cooperative blend of various abilities.

A second guideline in making the final selection is to consider which students might suffer adverse effects from participating in a program that requires high performance. Some students do not adjust well to the heightened competition that is almost always present in programs that bring together highly able youngsters, and for this reason, it may be wise to eliminate students whose participation in the program will place them under undue pressure.

SUMMARY

_____Placement Recommended in Section_____

_____Placement not Recommended in Section_____

PROJECT IMPROVE

Screening and Selection Form
for Identifying Gifted Students

Joseph S. Renzulli, 1971

Name_____ Date of Birth_____
Year Month Day

School_____ Grade_____

Teacher_____ Sex_____

Section A: Intelligence Test Information

1. Group Intelligence Tests

Date	Grade	Name of Test	Verbal Score	Non-Verbal Score	Total Score

Based on the above information and the established cut-off score of_____,
the following action is recommended:

_____ Placement in the program is recommended.
_____ An individual intelligence test should be administered.
_____ Additional information is needed (proceed to Section B).
_____ Placement is not recommended at this time.

2. Individual Intelligence Tests

Date	Grade	Name of Test	Verbal Score	Non-Verbal Score	Total Score

Attach report of examiner.

Based on the above information, the following action is recommended:

_____ Placement in the program is recommended.

_____ Additional information is needed (proceed to section B).

_____ Placement is not recommended at this time.

Comments:

Section B: Achievement Information

1. Achievement Tests

Date	Grade	Name of Test	Reading G.E.*	%ile	Lang.Total G.E.	%ile	Arith.Total G.E.	%ile	Soc. Stud. G.E.	%ile	Composite G.E.	%ile

* G.E. = Grade Equivalent

Circle all scores that are two or more years above grade level and/or above the 90th percentile.

Student's best area(s) of achievement_____.

Student's poorest area(s) of achievement_____.

2. End-of-year Grades

Date	Grade	Teacher	Reading	Arith.	Lang. Arts	Social Studies	Science

Attach relevant comments regarding achievement from permanent record.

Student's best area(s) of performance _____.

Student's poorest area(s) of performance _____.

Based on the information from Sections A and B, the following action is recommended:

_____ Placement in program in the area(s) of _____ is recommended.

_____ Additional information is needed (proceed to Section C).

_____ Placement is not recommended at this time.

Section C: Guided Teacher Judgment

1. Scale for Rating the Behavioral Characteristics of Superior Students. (See Exceptional Children, Vol. 38, November, 1971.)

Date	Grade	Teacher	Learning	Motivation	Creativity	Leadership
Mean score for group:						

2. Other Rating Scale Information (Specify)

Based on the information from Sections A, B, and C, the following action is recommended:

_____ Placement in the program is recommended.

_____ Additional information is needed in the form of:

_____

_____

_____

_____ Placement is not recommended at this time.

Section D: Special Nominations

In the space below, summarize the comments of teachers if this child is a special nomination:

Based on the above comments and in view of the information provided in Sections A, B, and C, the following action is recommended:

_____ Placement in the program is recommended.

_____ Additional information is needed in the form of:

_____

_____

_____

_____ Placement is not recommended at this time.

Section E: Special Aptitudes and Talents

1. Tests and Rating Scales of Special Aptitudes and Talents

Date	Name of Test	Results

2. Summary of Results from Auditions or Evaluations of Products or Performances.

   Person making evaluation_____

Based on the above information, the following action is recommended:

_____ Placement in the program is recommended.

_____ Additional information is needed in the form of:

_____

_____

_____

_____ Placement is not recommended at this time.

The Commonwealth of Massachusetts
Department of Education
Division of Elementary & Secondary Education

IDENTIFICATION

The following process is shown only as one approach to identification of academically talented pupils. This is a two-step procedure for placement of a pupil into a program for academically talented pupils.

I. Screening Procedure

A. Pupils who meet one or more of the following criteria are nominated for possible placement in academically talented programs.

1. Group I.Q. - 120 or higher
2. Marks - A and B
3. Emotionally adjusted
4. Upper 10% of local achievement norms or achievements at least two years above grade level
5. Recommended

II. Final Selection

A. Each candidate may be placed in a program if a pupil meets criteria 1 and 4 of the above.

B. Further evaluation is necessary if each student meets criteria 1 and 4 but does not meet criteria 2, 3, and 5. Further evaluation is needed if a student meets criteria 1 but not 4 or 4 but not 1.

The purpose of good procedures for identifying and selecting academically talented pupils is two-fold:

1. To include the pupils who should be placed in an academically talented class on the basis of predetermined criteria.

2. To exclude pupils who should not be placed in an academically talented class on the basis of the same predetermined criteria.

The initial screening process is utilized to select a group of candidates for the academically talented program. This initial process should be followed by more specific evaluative procedures of candidates in order that the final selection can be made with a greater degree of confidence and accuracy, i.e., include pupils who meet the criteria and exclude those who do not.

The results of intelligence tests administered in a group situation are less dependable for the primary pupil than for other age groups. In order to overcome this difficulty and to be able to make selections with a rather high degree of confidence, one or more of the following alternative procedures can be utilized:

1. Individual intelligence tests; if possible, have an individual intelligence test administered to each prospective pupil. or

2. Group intelligence tests

    a. Administer a group I.Q. test individually to a prospective pupil, and

    b. After a reasonable length of time, readminister other forms of group I.Q. tests previously given or administer another group intelligence test.

The utilization of the two-step procedure for the identification and selection of academically talented pupils affords the opportunity for a more concise job of identification.

During the initial screening process, a relatively large number of pupils will be included in the initial group. On the other hand, if pupils are screened initially on the basis of all criteria, then some who would be found on further evaluation to qualify would be eliminated. For example, a pupil who meets only four out of the five criteria would not receive further consideration.

A procedure for the final selection of pupils is essential in order to insure a high degree of confidence that the type of pupil desired for the program is being selected. Perhaps the most efficient method is the combination of standardized group intelligence and achievement test scores. From the intelligence tests results, conferences can be made about the intellectual potential of students in the areas of cognitive memory and evaluation, as well as predicting academic performance. The achievement test often is a means of discovering pupils whose abilities have not been shown in group intelligence tests. On the other hand, pupils who do not meet intelligence and achievement test criteria should (1) be further evaluated as a further check on the adequacy of previous scores, and/or (2) be excluded from placement in a program.

OUTLINE FOR THE IDENTIFICATION PROCESS

Ideally, the identification process should begin in kindergarten and continue the entire school career. A breaking point in this process occurs at the time of certification. Prior to certification, the identification process tends to be historical. Data are collected concerning the individual's development and a thorough assessment is made of his various potentialities with particular focus upon his mental abilities. Subsequent to certification, the identification porcess becomes more or less synonymous with the accumulation and use of a case study. The main categories within the case study have, of course, already been described by the kinds of case history and psychometric variables collected.

The first time a pupil is considered for possible certification and program placement, the following steps might be followed:

(1) SCREENING. A battery of group devices might be used to determine whether or not a given group of individuals scored in a significantly deviant fashion. Candidates who do not so score can be easily eliminated from further consideration on an efficient and logical basis. The test battery might include a short-form test of mental maturity, a language skills test, and an arithmetic skills test.

(2) NOMINATION. Subsequent to the screening procedure, a list of possible nominees becomes available. From this list of potential nominees, principals, teachers, and others may attempt to match candidates with appropriate selection criteria provided by their school district and based upon the education philosophy of the district. Nomination forms can be designed to include definitions and criteria for selection. In a sense, nomination forms become identification instruments of sorts because they call upon persons who nominate to supply valid criteria to justify their nominations.

(3) EXAMINATION AND CASE HISTORY. A qualified person such as a school psychologist should assess the intellectual abilities, personality functioning, past achievement, social and emotional adjustment patterns,

---

Reprinted with permission of California State Department of Education

developmental history, and specimens of productivity of the nominee. A case study form can be designed for this purpose and include questions pertaining to the pupil's attitudes, motivation, special skills, talents, interests, future plans, social maturity, educational background, health and development, home and family relationships, and other significant data. Such a case study can be designed in terms of the kinds of questions we will want to answer about this student's potentiality for inclusion in various program patterns. For example, certain of the areas mentioned, such as attitudes, motivation, and social maturity, may be more significant when advanced placement is considered as a program possibility.

(4) CERTIFICATION AND PLACEMENT. A committee of professional educators, including teachers, trained psychologists, and administrators, should study all of the data collected with a view toward placing pupils in appropriate program patterns. Case conferences with the parents should acquaint them with the data collected and garner their viewpoints as important factors in placement. Placement decisions must be subjected to constant revision in light of new data. Pupils themselves should play a key role in the placement procedure. If for any reason a pupil does not wish to participate in a given program, his wishes should be respected.

(5) PERIODIC FOLLOW-UP. Periodically the entire case study record should be reassessed in light of new evidence. Mental ability and achievement test results, general aptitude results, indications of vocational interests, academic records of performance, anecdotal notes by teachers, discipline record, opinions and attitude changes of parents, and periodic self-evaluation and appraisal by the student himself are all factors which are considered in the reassessment of a pupil's suitability for certain programs or his need for certain counseling or instructional experiences.

(6) EVALUATION. Evaluation of two sorts needs to occur for ultimate program success. In the first place, each pupil needs to be evaluated on a yearly basis with reference to his increment of academic growth, interest in the special program, and general development in areas other than achievement. A second type of evaluation would ascertain general increments of academic growth. These need to be measured and, preferably, compared with those gains recorded for similar or matched groups. Also, the institution needs to weigh such intangible factors as general faculty morale, public acceptance of the program,

general cultural contribution of the program and usefulness and adaptability of techniques and materials for general curriculum development.

THE STRUCTURE OF THE CASE STUDY

California Project Talent has intended this case study to be intensive as well as extensive in terms of the data collected. Survey instruments were developed to "appraise the total child from multiple perspectives in a variety of situations." The case study is designed to collect the following kinds of information:

(1) BACKGROUND INFORMATION. This information would include historical and developmental data.

(2) HEALTH AND MEDICAL RECORD. This would include typical health data including measurements and indications of serious problems, illnesses, or the like.

(3) SCREENING AND NOMINATION FORM. This form is intended to collect from the classroom teacher working in cooperation with the school psychologist the bulk of the background information necessary to make decisions concerning certification and placement of the pupil. The usual test data, cumulative record data, and anecdotal notes from teachers are collected. In addition, a series of specially designed items which lend themselves to multiple choice decisions have been developed to appraise the pupil's intellectual functioning, his interest areas, his performance in terms of actual classroom output, his physical development, his social development, his emotional development, and other potential problem areas.

(4) PARENT INVENTORY. The parent supplies the school with a description of such factors as occupational background, description of the family unit, indications of superior performance in the home, family activities, vocational and other expectancies on the part of parents for their child, the child's typical extracurricular activities, and suggestions for meeting the child's special needs. An inventory similar to that checked by the teacher is administered to the parent. Interesting comparisons of the way in which parents and teachers view the same child can be made. Contradictions would need to be reconciled of course.

(5) PSYCHOLOGIST'S SUMMARY AND EVALUATION. The professional worker organizing the study of the child needs to develop an effective summary and recommendations. He would interpret the data, including a self-appraisal by the pupil.

CONFIDENTIALLY AND ETHICS

Concerning identification, the Gifted Child Committee of the California Association of School Psychologists and Psychometrists has stated:

> "The psychologist has a responsibility to guard against repeated application of group tests directed toward the qualification of as many children as possible. A line must be drawn between legitimate evaluation and re-evaluation on the one hand, and exploitation on the other. Planning for a gifted child must be based upon accurate information regarding exceptional educational needs insofar as possible. In some instances, the psychologist should discourage as well as encourage placement of mentally gifted minors in specific programs.
>
> "Administration of the entire individual test should be the rule in identification, whenever individual tests are used. The complete test protocol should be available for future consideration and evaluation." *

Professional workers should restrict their contributions of data to the limitations of their background and competencies. In general, school psychologists or other qualified pupil personnel workers should collect, synthesize, and analyze case study data. While teachers contribute information and utilize recommendations, they must be cautious when probing into areas such as personality assessment.

* Gifted Child Committee of the California Association of School Psychologists and Psychometrists, The School Psychologists and the Education of Gifted Children. California State Department of Education, Division of Instruction, September, 1962.

II. GENERAL SYSTEMS AND INSTRUMENTS:

B. SAMPLES OF RATING SCALES AND CHECK-LISTS WHICH CAN BE INCORPORATED INTO IDENTIFICATION SYSTEMS

SCALE FOR RATING BEHAVIORAL CHARACTERISTICS OF SUPERIOR STUDENTS

JOSEPH S. RENZULLI/ROBERT K. HARTMAN

Name_____Date_____

School_____Grade_____Age_____
Years/Months

Teacher or person completing this form_____

How long have you known this child?_____Months.

DIRECTIONS. These scales are designed to obtain teacher estimates of a student's characteristics in the areas of learning, motivation, creativity, and leadership. The items are derived from the research literature dealing with characteristics of gifted and creative persons. It should be pointed out that a considerable amount of individual differences can be found within this population; and therefore, the profiles are likely to vary a great deal. Each item in the scales should be considered separately and should reflect the degree to which you have observed the presence or absence of each characteristic. Since the four dimensions of the instrument represent relatively different sets of behaviors, the scores obtained from the separate scales should not be summed to yield a total score. Please read the statements carefully and place an X in the appropriate place according to the following scale of values:

1. If you have seldom or never observed this characteristic.
2. If you have observed this characteristic occasionally.
3. If you have observed this characteristic to a considerable degree.
4. If you have observed this characteristic almost all of the time.

Space has been provided following each item for your comments.

Reprinted, with permission, from Exceptional Children, Nov., 1971.

SCORING. Separate scores for each of the three dimensions may be obtained as follows:

* Add the total number of X's in each column to obtain the "Column Total."
* Multiply the Column Total by the "Weight" for each column to obtain the "Weighted Column Total."
* Sum the Weighted Column Totals across to obtain the "Score" for each dimension of the scale.
* Enter the Scores below.

Learning Characteristics....._____

Motivational Characteristics....._____

Creativity Characteristics....._____

Leadership Characteristics....._____

PART I: LEARNING CHARACTERISTICS

	Seldom or never	Occasionally	Considerably	Almost always
1. Has unusually advanced vocabulary for age or grade level; uses terms in a meaningful way; has verbal behavior characterized by "richness" of expression, elaboration, and fluency. (National Education Association, 1960; Terman & Oden, 1947; Witty, 1955)	____	____	____	____
2. Possesses a large storehouse of information about a variety of topics (beyond the usual interests of youngsters his age). (Ward, 1961; Terman, 1925; Witty, 1958)	____	____	____	____
3. Has quick mastery and recall of factual information. (Goodhart & Schmidt, 1940; Terman & Oden, 1947; National Education Association, 1960)	____	____	____	____

4. Has rapid insight into cause-effect relationships; tries to discover the how and why of things; asks many provocative quesions (as distinct from informational or factual questions); wants to know what makes things (or people) "tick." (Carroll, 1940; Witty, 1958; Goodhart & Schmidt, 1940) ____ ____ ____ ____

5. Has a ready grasp of underlying principles and can quickly make valid generalizations about events, people, or things; looks for similarities and differences in events, people, and things. (Bristow, 1951; Carroll, 1940; Ward, 1961) ____ ____ ____ ____

6. Is a keen and alert observer; usually "seas more" or "gets more" out of a story, film, etc. than others. (Witty, 1958; Carroll, 1940; National Education Association, 1960) ____ ____ ____ ____

7. Reads a great deal on his own; usually prefers adult level books; does not avoid difficult material; may show a preference for biography, autobiography, encyclopedias, and altases. (Hollingworth, 1942; Witty, 1958; Terman & Oden, 1947) ____ ____ ____ ____

8. Tries to understand complicated material by separating it into its respective parts; reasons things out for himself; sees logical and common sense answers. (Freehill, 1961; Ward, 1962; Strang, 1958) ____ ____ ____ ____

Column Total ____ ____ ____ ____

Weight 1 2 3 4

Weighted Column Total ____ ____ ____ ____

Total ____

PART II: MOTIVATIONAL CHARACTERISTICS

	Seldom or never	Occasionally	Considerably	Almost always
1. Becomes absorbed and truly involved in certain topics or problems; is persistent in seeking task completion. (It is sometimes difficult to get him to move on to another topic.) (Freehill, 1961; Brandwein, 1955; Strang, 1958)	___	___	___	___
2. Is easily bored with routine tasks. (Ward, 1962; Terman & Oden, 1947; Ward, 1961)	___	___	___	___
3. Needs little external motivation to follow through in work that initially excites him. (Carroll, 1940; Ward, 1961; Villars, 1957)	___	___	___	___
4. Strives toward perfection; is self-critical; is not easily satisfied with his own speed or products. (Strang, 1958; Freehill, 1961)	___	___	___	___
5. Prefers to work independently; requires little direction from teachers. (Torrance, 1965; Gowan & Demos, 1964; Mokovic, 1953)	___	___	___	___
6. Is interested in many "adult" problems such as religion, politics, sex, race--more than usual for age level. (Witty, 1955; Ward, 1961; Chaffee, 1963)	___	___	___	___
7. Often is self assertive (sometimes even aggressive); stubborn in his beliefs. (Buhler & Guirl, 1963; Gowan & Demos, 1964; Ward, 1961)	___	___	___	___
8. Likes to organize and bring structure to things, people, and situations. (Ward, 1961; Gowan & Demos, 1964; Buhler & Guirl, 1963)	___	___	___	___

9. Is quite concerned with right and wrong, good and bad; often evaluates and passes judgment on events, people and things. (Getzels & Jackson, 1962; Buhler & Guirl, 1963; Carroll, 1940)	____	____	____	____
Column Total	____	____	____	____
Weight	1	2	3	4
Weighted Column Total	____	____	____	____
Total			____	

PART III: CREATIVITY CHARACTERISTICS

	Seldom or never	Occasionally	Considerably	Almost always
1. Displays a great deal of curiosity about many things; is constantly asking questions about anything and everything. (National Education Association, 1960; Goodhart & Schmidt, 1940; Torrance, 1962)	____	____	____	____
2. Generates a large number of ideas or solutions to problems and questions; often offers unusual ("way out"), unique, clever responses. (Carroll, 1940; Hollingworth, 1942; National Education Association, 1960)	____	____	____	____
3. Is uninhibited in expressions of opinion; is sometimes radical and spirited in disagreement; is tenacious. (Torrance, 1965; Gowan & Demos, 1964, Getzels & Jackson, 1962)	____	____	____	____

4. Is a high risk taker; is adventurous and speculative. (Getzels & Jackson, 1962; Villars, 1957; Torrance, 1965)	____	____	____	____
5. Displays a good deal of intellectual playfulness; fantisizes; imagines ("I wonder what would happen if...."); manipulates ideas (i.e., changes, elaborates upon them); is often concerned with adapting, improving, and modifying institutions, objects, and systems. (Rogers, 1959; Gowan & Demos, 1964; Getzels & Jackson, 1962)	____	____	____	____
6. Displays a keen sense of humor and sees humor in situations that may not appear to be humorous to others. (Torrance, 1962; Gowan & Demos, 1964; Getzels & Jackson, 1962)	____	____	____	____
7. Is unusually aware of his impulses and more open to the irrational in himself (freer expression of feminine interest for boys, greater than usual amount of independence for girls); shows emotional sensitivity. (Torrance, 1962; Rothney & Coopman, 1958; Gowan & Demos, 1964)	____	____	____	____
8. Is sensitive to beauty; attends to aesthetic characteristics of things. (Wilson, 1965; Witty, 1958; Villars, 1957)	____	____	____	____
9. Is nonconforming; accepts disorder; is not interested in details; is individualistic; does not fear being different. (Carroll, 1940; Buhler & Guirl, 1963; Getzels & Jackson, 1962)	____	____	____	____
10. Criticizes constructively; is unwilling to accept authoritarian pronouncements without critical examination. (Ward, 1962; Martinson, 1963: Torrance, 1962)	____	____	____	____
Column Total	____	____	____	____
Weight	1	2	3	4
Weighted Column Total	____	____	____	____

PART IV: LEADERSHIP CHARACTERISTICS

	Seldom or never	Occasionally	Considerably	Almost always
1. Carries responsibility well; can be counted on to do what he has promised and usually does it well. (Baldwin, 1932; Bellingrath, 1930; Burks, 1938)	____	____	____	____
2. Is self-confident with children his own age as well as adults; seems comfortable when asked to show his work to the class. (Drake, 1944; Cowley, 1931; Bellingrath, 1930)	____	____	____	____
3. Seems to be well liked by his classmates. (Bellingrtah, 1930; Garrison, 1935; Zeleny, 1939)	____	____	____	____
4. Is cooperative with teacher and classmates; tends to avoid bickering and is generally easy to get along with. (Dunkerly, 1940; Newcomb, 1943; Fauquier & Gilchrist, 1942)	____	____	____	____
5. Can express himself well, has good verbal facility and is usually well understood. (Simpson, 1938; Terman, 1904; Burks, 1938)	____	____	____	____
6. Adapts readily to new situations; is flexible in thought and action and does not seem disturbed when the normal routine is changed. (Eichler, 1934; Flemming, 1935; Caldwell, 1926)	____	____	____	____
7. Seems to enjoy being around other people; is sociable and prefers not to be alone. (Drake, 1944; Goodenough, 1930; Bonney, 1943)	____	____	____	____
8, Tends to dominate others when they are around; generally directs the activity in which he is involved. (Richardson & Hanawalt, 1943; Hunter & Jordan, 1939; Bowden, 1926)	____	____	____	____

	Seldom or never	Occasionally	Considerably	Almost always
9. Participates in most social activities connected with the school; can be counted on to be there if anyone is. (Zeleny, 1939; Link, 1944; Courtenay, 1938)	____	____	____	____
10. Excels in athletic activities; is well coordinated and enjoys all sorts of athletic games. (Flemming, 1935; Partridge, 1934; Spaulding, 1934)	____	____	____	____
Column Total	____	____	____	____
Weight	1	2	3	4
Weighted Column Total	____	____	____	____
Total				____

INTELLECTUAL FUNCTIONING

Disregarding test results, would you rank this pupil in the upper five percent of his class in academic performance? In your opinion, is this child "mentally gifted?" Is classroom performance consistent with results of standardized tests?

Upper five percent?		"Mentally gifted"? (by State criteria)		Performance consistent with tests?	
Yes	No	Yes	No	Yes	No

Check the column which best describes the child's intellectual functioning. These items include a range of possible characteristics or objectives. A child in not expected to be high on all of them.

		Little 1	2	Moderate 3	4	Much 5
(1) Knowledge and Skills Possesses a comfortable knowledge of basic skills and factual information.						
(2) Concentration Has ability to concentrate; is not easily distracted.						
(3) Enjoyment of School Enjoys academic pursuits and assignments; likes school.						
(4) Persistence Has the ability and desire to follow through on work; concerned with completion; able to see a problem through.	In own interests					
	In assigned tasks					
(5) Responsiveness Is easily motivated; responsive to adult suggestions and questions.						

	Little 1	2	Moderate 3	4	Much 5
(6) Intellectual Curiosity Pursues interests primarily to understand or satisfy curiosity; questions the common, ordinary, or the unusual; wants to know how and why; generates questions of his own (in connection with personal interests or group concerns).					
(7) Challenge Enjoys the challenge of difficult problems, assignments, issues, materials.					
(8) Perceptiveness Is alert, perceptive, and observant beyond his years; aware of many stimuli.					
(9) Verbal Facility Shows marked facility with language; uses many words easily and accurately.					
(10) Fluency of Ideas Produces a large number of ideas or products, often very quickly.					
(11) Flexibility Is able to approach ideas and problems from a number of perspectives; adaptable; able to find alternate ways of solving problems.					
(12) Sensitivity to Problems Perceives and is aware of problems that others may not see; is ready to question or change existing situations and suggest improvements.					
(13) Originality Often uses original methods of solving problems; is able to combine ideas and materials in a number of ways, or creates products of unusual character or quality.					
(14) Imagination Can freely respond to stimuli with the production of mental images; may "play" with ideas or produce remote, fanciful associations or insights.					

	Little 1	2	Moderate 3	4	Much 5
(15) Reasoning Is logical, often generalizes or applies understanding in new situations, expands concepts into broader relationships, or sees parts in relation to the whole.					
(16) Scientific Method Can define problems, formulate hypotheses, test ideas, and arrive at valid conclusions.					
(17) Independence in Thought Inclined to follow his own organization and ideas rather than the structuring of others.					
(18) Independence in Action Able to plan and organize activities, direct action, and evaluate results.					
(19) Independence in Work Habits Requires a minimum of adult direction and attention; possesses research skills to facilitate independent work.					
(20) Elaboration Concerned with detail and complexity; often involved with a variety of implications and consequences.					
(21) Aesthetic Appreciation Enjoys and is responsive to beauty in the arts or nature.					

(22) Describe any unpredictable behavior, such as wandering away from seat without apparent purpose, which interferes with study.

(23) Describe any unusual preoccupations which as "daydreaming" or "flights into fantasy" which lessen the pupil's learning efficiency.

(24) Describe any learning characteristics which seem outstanding or would especially facilitate this child's progress in a challenging educational program.

(25) Describe any learning difficulties the child might have in particular areas which could hinder progress in such a program.

(26) Describe any examples of the child's creative productivity.

The following list of subjects and activities is to be checked for (1) the child's apparent interest, judged by your observations of classroom behavior; (2) performance, judged either by grades or quality of products or actions; and (3) the grade level at which the child seems capable of functioning.

	Interest					Performance					Capability
	Little		Moderate		Much	Low		Aver.		High	Grade Level
	1	2	3	4	5	1	2	3	4	5	
Art											
Construction or Manipulation											
Dramatic Expression											
Handwriting											
Oral Expression											
Spelling											
Reading											

	Interest					Performance					Capability
	Little		Moderate		Much	Low		Aver.		High	Grade Level
	1	2	3	4	5	1	2	3	4	5	
Written Expression											
Foreign Language											
Mathematics											
Music											
Physical Activities											
Science											
Social Studies											

Physical Development

	Little		Moderate		Much
	1	2	3	4	5
(27) Physical Expression Indicates that physical activities are a comfortable, enjoyable area for self-expression.					
(28) Physical Ability Co-ordination, timing, agility, and ability to satisfactorily participate in organized games.					
(29) Energy Level Has available resources of pep and vigor for carrying on most activities.					
(30) Physical Appearance Appears neat, well-groomed; has appropriate clothes for age and group.					

(31) Check the spaces which best describe the child's physical build and posture as compared with the rest of the class.

Physical build:	Posture:
Small stature _____	Good _____
Medium build _____	Average _____
More physically developed than most _____	Poor _____

(32) Describe any important aspect of the pupil's health or physical development which might affect participation in a challenging educational program.

_____

_____

_____

Social Development

Check the column which best describes this child's social development.

		Little 1	2	Moderate 3	4	Much 5
(33) Popularity Others seem to enjoy and want to be with this child; frequently seen interacting with others in a social friendly manner.	With same sex					
	With opp. sex					
(34) Acceptance of others Relates to others with genuine interest and concern; enjoys others; seeks them out; shows warmth.						
(35) Status Assumes public roles and leadership positions or enjoys considerable status in peer group.						
(36) Social Maturity Able and willing to work with others, can "give and take," is sensitive to the needs and feelings of others, shows consideration, observes rules of social conduct.						

	Little 1	2	Moderate 3	4	Much 5
(37) Sense of Humor Ability to laugh at himself; gets enjoyment and pleasure from lighter moments in school day, laughs easily and comfortably.					
(38) Sense of Well-being Seems self-confident, happy, and comfortable in most situations.					
(39) Rapport with Teacher Two-way communication which seems to bring enjoyment to both child and teacher; relatively open, relaxed, and personal relationship.					

(40) Describe any characteristic of social behavior which you feel could interfere with this child's educational progress.

(41) Comment upon the child's apparent capabilities for forming friendships and identifying with groups such as scouts, church or club.

Emotional Development

Check the column which best describes this child's emotional development. Please note that a high score may not be desirable on all of the items which follow.

	Little 1	2	Moderate 3	4	Much 5
(42) Emotional Stability Is able to cope with normal frustrations of living; adjusts to change with minimum of difficulty.					

	Little 1	2	Moderate 3	4	Much 5
(43) Emotional Control Expresses and displays emotions appropriately; emotional outbursts rarely occur.					
(44) Openness to Experience Appears to be receptive to new tasks or experiences; seems able to take reasonable risks; can respond naturally to unusual or unexpected stimuli.					
(45) Enthusiasm Enters into most activities with eagerness and wholehearted participation; maintains enthusiasm for duration of activity.					
(46) Self-Acceptance Seems to understand and accept self; able to view self in terms of both limitations and abilities.					
(47) Independence Behavior usually is dictated by his own set of values; is concerned with the freedom to express ideas and feelings.					
(48) Conformity Behavior is influenced by expectancies and desires of others.	Influence of adults				
	Influence of peers				
(49) Anxiety over Achievement Seems anxious about achievement; worried or concerned about school work, or the impression any performance makes on others.					
(50) Competitiveness Has high standards for performance, usually desiring to do as well or better than peers.					
(51) Dominance Asserts self with influence in a group situation.					
(52) Agressiveness Acts with apparent intent to hurt others.					

(53) Describe any emotional immaturity or other personality characteristic which could hinder this child's development.

DADE COUNTY PUBLIC SCHOOLS

SOUTH CENTRAL DISTRICT

RATING SCALE FOR FIRST-GRADE PUPILS

DIRECTIONS: Please place an X in the square beside each question which BEST describes the pupil.

	NO	YES
1. Is the pupil able to read two years above grade level?	____	____
2. Can the pupil recognize the number and sequence of steps in a specified direction?	____	____
3. Can the pupil recognize the properties of right angles in a gemetric figure?	____	____
4. Can the pupil identify a three-dimensional object from a two-dimensional projection and/or a two-dimensional object from a three-dimensional projection?	____	____
5. Does the pupil form sets and subsets?	____	____
6. Does the pupil understand the concepts of place value?	____	____

	Seldom or never	Occasionally	Frequently	Almost always
7. Can the pupil create a short story for a familiar subject?	____	____	____	____
8. Can the pupil interpret stories and picture in his own words?	____	____	____	____
9. Does the pupil display curiosity by asking questions about anything and everything?	____	____	____	____
10. Does the pupil question critically?	____	____	____	____

DADE COUNTY PUBLIC SCHOOLS

SOUTH CENTRAL DISTRICT

RATING SCALE FOR KINDERGARTEN PUPILS

DIRECTIONS: Please place an X in the square beside each question which BEST describes the pupil.

A. LANGUAGE	NO	YES
1. Is the pupil able to read?	____	____
2. Do the pupil's speech and sentence patterns indicate he is ready to read?	____	____
3. Does the pupil understand his relationship in such words as up - down, top - bottom, big - little, far - near?	____	____
4. Does the pupil follow a three-step direction?	____	____
5. Does the pupil remain on task for a minimum of 25 minutes?	____	____
B. PSYCHOMOTOR ABILITIES		
1. Can the pupil skip, throw and catch?	____	____
2. Does the pupil exhibit coordination by being able to bounce a ball or tie shoelaces?	____	____
3. Can the pupil reproduce a five-beat rhythm pattern?	____	____
4. Can the pupil draw a person?	____	____
5. Can the pupil complete the missing parts of an incomplete familiar picture by drawing the parts in their proper perspective?	____	____
6. Can the pupil reproduce a three-dimensional design?	____	____
7. Can the pupil hear likenesses and differences in the beginnings of words; e.g., hill - bill, feet - treat, boat - coat?	____	____

C. MATHEMATICS	NO	YES
1. Can the pupil repeat five digits forward and three reversed?	____	____
2. Can the pupil join and separate a sequence of sets?	____	____
3. Can the pupil recognize and understand the value of coins (penny, nickel, dime and quarter)?	____	____

D. CREATIVITY	Seldom or never	Occasionally	Frequently	Almost always
1. Can the pupil interpret stories or pictures in his own words?	____	____	____	____
2. Can the pupil predict possible outcomes for a story?	____	____	____	____
3. Can the pupil create rhymes which communicate?	____	____	____	____
4. Does the pupil offer solutions for problems that are discussed in the classroom?	____	____	____	____
5. Does the pupil display curiosity by asking many questions or by other types of behavior?	____	____	____	____
6. Does the pupil question critically?	____	____	____	____
7. Does the pupil explore new ideas or invent new ways of saying and telling?	____	____	____	____
8. Does the pupil perform independently?	____	____	____	____
E. GENERAL CHARACTERISTICS				
1. Does the pupil readily adapt to new situations; is he flexible in thought and action; and does he seem undisturbed when the normal routine is changed?	____	____	____	____
2. Does the pupil seek new tasks and activities?	____	____	____	____

	Seldom or never	Occasionally	Frequently	Almost always
3. Is the pupil cooperative; does he tend to avoid bickering; and is he generally easy to get along with?	____	____	____	____
4. Does the pupil tend to dominate others and generally direct the activity in which he is involved?	____	____	____	____
5. Does the pupil appear to be happy and well adjusted in school work, as evidenced by relaxed attitude, self-confidence, and pride in work?	____	____	____	____
Column Total	____	____	____	____
Weight	____	____	____	____
Weighted Column Total	____	____	____	____
Total			____	

RATING SCALE #5: TALENTED PUPIL CHARACTERISTICS

SCHOOL_____ TEACHER_____

Place an X in the appropriate square beside each characteristic which best describes the pupil.

PUPIL'S NAME_____

	Seldom or never	Occasionally	Frequently	Almost always
1. Displays a great deal of curiosity about many things				
2. Generates ideas or solutions to problems and questions				
3. Sees many aspects of one thing; fantasizes, imagines, manipulates ideas, elaborates				
4. Applies ideas				
5. Is a high risk taker; is adventurous and speculative				
6. Displays a keen sense of humor				
7. Is sensitive to beauty; attends to aesthetic characteristics				
8. Predicts from present ideas				
9. Demonstrates unusual ability in painting/drawing				
10. Exhibits unusual ability in sculpturing or clay modeling				
11. Shows unusual ability in handicrafts				
12. Provides evidences of unusual ability in use of tools				
13. Shows unusual ability in instrumental music				
14. Demonstrates unusual ability in vocal music				
15. Indicates special interest in music appreciation				

RATING SCALE # 5 con't

Pupil's Name_____

	Seldom or never	Occasionally	Frequently	Almost always
16. Displays ability in role playing and drama	____	____	____	____
17. Demonstrates ability to dramatize stories	____	____	____	____
18. Shows ability in oral expression	____	____	____	____
19. Demonstrates unusual ability in written expression: creating stories, plays, etc.	____	____	____	____
20. Shows evidence of independent reading for information and pleasure	____	____	____	____
21. Demonstrates ability in dancing: toe, tap, creative	____	____	____	____
22. Displays mechanical interest and unusual ability	____	____	____	____
23. Shows unusual skill and coordination in his gross muscular movements such as ball playing, running	____	____	____	____
Column Total	____	____	____	____
Weight	____	____	____	____
Weighted Column Total	____	____	____	____
Total				____

II. GENERAL SYSTEMS AND INSTRUMENTS:

C. AN EXEMPLARY STUDY: DEVELOPMENT OF AN EVALUATION PROCEDURE TO IDENTIFY GIFTED CHILDREN (SUMMARY REPORT, SIMSBURY, CONNECTICUT)

Simsbury's program for intellectually gifted elementary school students serves children in grades four through eight who have been identified by test data and teacher/principal recommendation. These students are provided service approximately an hour a day during which they are exposed to divergent-productive thinking processes in small groups.

Realizing that intellectual aptitude is but one of the areas of giftedness, the Project Directors, Mr. Leo Salvatore, School Psychologist, and Ms. Patricia Ciabotti, Teacher of the Gifted, set about to devise and adapt means to identify giftedness in the areas of art, music, creativity, and motor ability. During the summer months of 1973, the Project Directors met to develop tests and procedures to be used as measures of aptitude in these areas.

In addition to measuring the specific skills involved in these spheres of giftedness, the Project Directors were interested in possible correlations which might be found in ratings by teachers and peers with an eye to utilizing these peer and teacher ratings as means to quickly identify possible strength areas. Thus the following tests were written:

Peer Rating Scale

Teacher Rating Scale

Music Aptitude Test

Motor Aptitude Test

Art Aptitude Test

Creativity Level Test

Peer Rating Scale: The Peer Rating Scale attempts to gain another perspective in the identification of gifted and talented children through the use of peer evaluation. The scale has been designed to determine not only the intellectually gifted but also those who exhibit skill in the areas of music, creativity, physical prowess, and art. It was developed to appeal to third and fourth grade students; elicit quick and direct responses; and be easily scored by classroom teachers.

Teacher Rating Scale: The purpose of the Teacher Rating Scale is to identify children with exceptional intelligence. The teacher's direct observation of the child in the classroom situation is taken into account in filling out the rating scale.

Music Aptitude Test: The Music Aptitude Test was developed to evaluate outstanding ability in the areas of pitch, rhythm, melody, and sensitivity to musical interpretation.

The test involves the use of piano and drum and is easily administered by the music teacher.

Motor Aptitude Test: The Motor Aptitude Test was designed to evaluate performance of the following fundamental motor skills: balance, agility, hand-eye coordination, foot-eye coordination, rhythm, speed, and insight. Using an obstacle course which encompasses these areas, the physical education teacher can quickly assess and rank a student's performance.

Art Aptitude Test: The Art Aptitude Test identifies outstanding ability in the area of art. Three levels are evaluated on this test: talent, giftedness, and creativity.

Talented: Those who have above average skill in reproduction of subject.

Gifted: Those whose art demonstrates a maturity beyond their chronological age.

Creative: Those who are able to originate concepts which go beyond the subject matter.

Creativity Level Test: The Creativity Level Test was adapted from the Torrance Test of Creative Thinking. The sections utilized demonstrate the child's ability to think in a productive-divergent manner by completing figures, problem solving, originating ideas, and evolving possible consequences to a situation.

Using grade three as a target for testing, the Directors and specialists in the fields of art, music and physical education, devised manuals and skill tests appropriate to that level. Field testing took place in all public and parochial schools in Simsbury with tests administered to 450 students by teachers competent in each area tested.

The completed tests were scored and ranked and comparisons sought among such measures as teacher ratings, peer ratings, intelligence, and ability tests. The statistical studies completed in the spring of 1974 are presented in the summary of test findings below.

A manual is being prepared describing each test and its use as well as the use of the complete test battery with large groups of children. Dissemination of the manual information and the summary of test data, correlation studies, and summary tables, shall be through the State Department of Education.

Summary of Test Findings

Correlation studies were conducted between peer rating scales and specific skill areas tests. In these studies, individual subtests of the Peer Rating Scale were compared to their counterparts on the various aptitude tests. Results indicate that the peer rating subtest concerned with IQ correlates best with IQ as measured by the alternate instrument, the Short Form Test of Academic Aptitude. The motor aptitude and music ratings made by the children on the Peer Rating Scale correlates least well with the alternate measures used. Identification of high ability in art by the Peer Rating Scale did not, in most cases, correlate well with the findings of the Art Aptitude Test. However, in a few isolated instances, there were highly significant positive relationships.

Comparisons were also made between teacher ratings and test scores on the various skill area tests. These findings indicate that in the IQ and motor aptitude areas, teachers are able to identify with 56% accuracy, the top 25% of the children in their class. There was least agreement between teacher ratings and test scores in art and music.

Correlation studies were also conducted between the Short Form Test of Academic Aptitude and the various skill areas tests. These findings indicate that at the third grade level, there is little or no correlation between IQ and any of the other abilities measured.

An analysis of the means and standard deviations of the various skill areas tests reveal that the motor, originality-fluency, and intelligence frequency distributions approach the normal curve. While the music test is skewed negatively, the art and motor tests tend to skew positively. The standard errors of the mean ranged from .13-.49.

Conclusions

The implementation of the various tests developed as part of this project indicates that there is merit in the use of the Peer Rating Scale and the Teacher Rating Scale in quickly screening children with outstanding ability. The Peer Rating Scale seems to best identify the high IQ children while the Teacher Rating Scale identifies children with high IQ and motor aptitude.

It was found that both the Teacher and the Peer Rating Scales were easily administered, enjoyed by the children taking the test, and quickly scored with a minimum amount of training and preparation on the part of the administrator.

Field testing of the Peer Rating Scale at higher grade levels indicate that it may be a more effective and accurate tool for identification at upper grade levels. This may be

due to increased sensitivity to the child's own performance in relation to that of others, the type of classroom structure, test taking experience, or greater honesty in responding to the test items.

By increasing the number of items and expanding the scoring procedure, it is felt that the Peer Rating Scale could become an extremely effective and efficient tool for quick identification of gifted and talented children.

The Teacher Rating Scale seems to be a viable tool for identification as presently written.

The various skill areas tests, especially the Art and Motor Aptitude Tests, seem to work effectively in assessing students with talent in these two areas. While all Art Aptitude Tests were scored as part of this study, it was found that the art teacher could very quickly sort out the top 5 to 10 percent of the students tested without scoring each test individually.

The Motor Aptitude Test was also a useful measure in identifying children with outstanding motor agility. The only problem encountered involved administration time which was longer than most other tests because each child had to be run through the obstacle course individually.

The Originality Test and the Music Aptitude Tests were the least successful measures developed. The Originality Test, a modification of the Torrance Test of Creative Thinking was very time consuming to score. There were also many areas that were not covered in the scoring guide making it difficult to obtain test score agreement between two different test scorers. Consequently it is felt that this procedure is not a very practical screening tool where great numbers of children are being screened.

The Music Aptitude Test was the most difficult instrument to construct because it involved two factors, a discriminating ear and a sensitivity to the mood and feeling of music. The instrument that was finally developed proved to be too easy thereby not discriminating very well between different ability groups. It also proved to be the least enjoyable test taken by the children because it required strict attention to the task, and a number of repetitious items that quickly became monotonous. Unlike all the other tests given, this was the only instrument developed that demanded a single solution or answer to the problem. It was strictly a test of convergent thinking.

Another important consideration was the attitude of the test administrator. Results varied markedly from class to class suggesting that the test administrator with a positive, concerned attitude towards the testing, conveyed this positive feeling to the children.

Overall, it is felt that this project has been successful as a first step in a process of bringing to awareness, the many talents and skills possessed by school children. With some refinement and further study, many of the procedures developed can be used successfully as screening tools and selection processes for gifted and talented children.

III. IDENTIFYING STUDENTS WITH EXTRA-ORDINARY LEARNING ABILITY (ACADEMICALLY GIFTED OR "TERMAN TYPES")

Definitions and Characteristics

Traditionally, the term "gifted child" has been applied to students with exceptionally high intellectual ability or achievement. As exemplified by the studies of Terman and Oden (1947), the traditional definition has referred to superior abstract verbal ability or academic aptitude as evidenced by high scores on intelligence tests (usually above 130 or 140 on individual tests). It is this bright, verbal, motivated, high-achieving child who is typically identified as gifted by professional educators and laymen alike.

In recent years, however, numerous researchers have asserted that the IQ, as an operational definition of intelligence, represents a somewhat limited sampling of the total spectrum of intellectual abilities. The conception of "giftedness" has accordingly been revised to include a broader range of talents and abilities. This broadened conception, inspired to a large degree by Guilford's Structure-of-Intellect model, includes such multi-dimensional talents as social leadership, creative or divergent production, and exceptional abiltiy in such areas as communication, planning, decision-making, and the creative and performing arts.

The terms "inteliectually gifted" or "academically talented" are now usually reserved for the narrower, traditional band of cognitive abilities which represent just one - albeit important - type of "gift". Since the classic early studies of gifted children were conducted by Louis Terman, it is not uncommon for children with high IQ's to be referred to as "Terman-type" students. These intellectually gifted students differ significantly from the general school population. They function at levels in advance of their peers and pose challenging educational problems because of their deviation from the norm. They are superior in abstract thinking and verbal reasoning, and they achieve well academically.

Terman observed several characteristics of intellectual giftedness in his studies. These students:

1. possess alertness beyond their years.

2. have keen powers of observation.

3. show a passionate desire to learn.

4. ask endless questions.

5. are interested in everything.

6. are ambitious to excel.

7. get the highest school marks.

8. write excellent exam papers.

9. have a fine command of language.

10. have fine reading powers.

11. show independence of judgment.

12. are original thinkers.

13. answer always to the point.

14. have a keen sense of humor.

15. have unusual powers of concentration.

16. are more dependable than other children their age.

17. are conscientious.

Of course, giftedness is complex; each individual will possess unique combinations of abilities. Essentially, the intellectually gifted child is one who consistently demonstrates superior mental abilities and characteristics for his age. Identifying students within this narrow range of giftedness is facilitated because they are motivated to achieve at levels more consistent with their intellectual ability.

Identification Procedures

Procedures for identifying intellectually gifted children are generally well established. The most effective instrument is the individual intelligence test (e.g. Stanford-Binet or Wechsler), but this method is rather expensive in terms of time, personnel, and money. Although it may be useful in certain instances, such as confirming borderline or doubtful cases, the individual test is not very practical for general screening. For this purpose, it makes more sense to use the slightly less accurate group tests of intelligence.

When using group tests for screening (i.e. for creating a pool of students for eventual selection), it is wise to recall that group tests may pass over students with reading difficulties, emotional or motivational problems, or students from disadvantaged backgrounds. It is also important to supplement these tests with other indicators of ability in order to be more certain of obtaining an accurate, stable measure and also to be more certain that the student -

especially in the early grades - is not merely a "hothouse gifted child" (i.e. an over-achieving child of less than superior ability from a super-enriched home).

Batteries of achievement tests are also used as supplements in the screening process. Students achieving two or more years above grade level deserve further scrutiny. Naturally, attention will be focused mainly on those subtests which describe performance in the academic areas for which the special program is designed. Poor achievement in math or science, for example, should not disqualify a candidate for a creative writing class. In addition to sharing the same limitations as group intelligence tests, achievement tests also fail to identify gifted underachievers unless the scores are viewed in combination with IQ scores.

The least accurate method of identifying intellectually gifted children is - sad to say - teacher nomination. The comprehensive study by Pegnato and Birch (1957) reveals that junior high school teachers nominated only 45% of students already identified as gifted on individual IQ tests. Moreover, 73% of the total number of children that they nominated were not really gifted at all. Despite these findings, there are probably a number of teachers, especially in the primary grades, who have a remarkable ability to spot "that certain spark" in a gifted child who might otherwise be missed by standardized instruments. Teacher judgments of demonstrated or potential ability can be improved considerably by the use of rating scales and checklists such as those included in section II.

Other important supplemental measures might include special aptitude tests, creativity tests, interest inventories, peer nominations, and self-assessment. Anecdotal reports on motivation and work habits and observations of school librarians and guidance counselors frequently add useful information. Interviews with the students and their parents in order to assess maturity, social and emotional development and other factors affecting participation in the program constitute a final step in the process before a decision is made regarding placement.

In determining final selection of children for the pool established by the above-mentioned criteria, certain cut-off points become crucial, especially in order to qualify for state reimbursement in Connecticut. State guidelines recommend a minimal cut-off point of two standard deviations above national norms on intelligence and achievement tests, unless the means for the local district are higher (as may be the case in affluent communities). Such students will represent roughly the top 3% of the population and will show IQ scores of 130 and beyond.

It is important to recall that these guidelines apply to the traditional, "Terman-type" of intellectually gifted students. Obviously, programs which are designed for artistically creative students, high-potential disadvantaged students, or underachievers will have different selection criteria and need not hew to the traditional cut-off points, since it is expected that there will be other relevant indicators of exceptional talent in the absence of high IQ scores.

References

Pegnato, C.W. and Birch, J.W. Locating gifted children in junior high schools: A comparison of methods. In W.B. Barbe (Ed.), Psycholgy and Education of the Gifted. New York: Appleton-Century-Crofts, 1965.

Terman, L.M. and Oden, M. Genetic studies of genius - IV: The gifted child grows up. Stanford, Cal.: Stanford University Press, 1947.

IV. IDENTIFYING THE DISADVANTAGED GIFTED

IDENTIFYING THE DISADVANTAGED GIFTED

Mary Frasier
University of Connecticut

It is sad when a "pint" is expected to yield a "quart" and fails to do so but it is a tragic loss to society when a "quart" produces only a "pint" or much less for lack of proper societal effort and programs.
- Baldwin, 1973

Early identification of the gifted disadvantaged and appraisal of the seeming range (intellectual, talented and creative socially gifted) and quality of their giftedness is of importance to the individual and our nation. The individual-because he is afforded an opportunity to develop his personal talents to the utmost. The nation benefits because he is afforded an opportunity to develop his personal talents to the utmost.
- Cooke, 1974

The recognition of the wasted talent among the so-called gifted disadvantaged has prompted a concentration of interest among those who would like to see this waste ended. Numerous articles and books have been written and numerous experimental programs and research projects have been implemented. Yet, many of the practitioners in the field of education charged with the responsibility of salvaging this talent are still not clear who these students are, what their needs are, and how these needs might best be met.

It would be an impossible task within the scope of this paper to recommend any clear cut rule-of-thumb definition for the identification of the gifted disadvantaged for the well-accepted axiom - "there are more differences <u>within</u> any group of human beings than <u>between</u> groups" - is particularly appli-

cable in this case. Therefore, this paper will be an attempt to clear up two semantic obstacles: (1) Who is the disadvantaged child? and (2) Who is the gifted disadvantaged child? Then, a composite of thoughts from the best writers on the subject of characteristics of the gifted disadvantaged will be presented. Finally, additional sources will be suggested or attached to this report for more complete definitive readings on the topic "gifted disadvantaged."

WHO ARE THE DISADVANTAGED?

The answer is simple: the poor, no matter what racial or ethnic antecedents they possess. Bailey and Stadt (1973) sum it up very nicely when they commented that the term "disadvantaged" is relative in the sense that not all individuals who are classified as disadvantaged exhibit the same general characteristics. The one common denominator, however - the stark reality behind "disadvantaged" and other generally used euphemisms - is that they refer to populations of children of the poor.

Finally, Havighurst (1964) reminds us that it should be reasserted that culturally disadvantaged is a relative term. That is, a child can be said to be disadvantaged only with respect to another individual. More specifically, the term means disadvantaged for living competently in an urban, industrial, and democratic society.

According to percentages cited by Hyram (1972), although 70 to 78 percent of this group are Caucasian, since these

Caucasians constitute only a relatively small percentage of the total Caucasian population in the United States, the greater percentage of the poor are found among Negroes, Mexican-Americans and Indian Americans. In terms of racial identification, Johnson (1970) identifies six groups of culturally disadvantaged as follows:

1. Negroes in the rural area and in the ghettos of the nation's centers.
2. Mexican-Americans in the rural Southwest and West and in the cities of these regions.
3. Pureto Ricans located in a few large Northern cities, especially in New York.
4. Caucasians in the rural South and especially in the Appalachian region, many of whom have migrated to Northern industrial urban centers.
5. Indian Americans in the Southwest and West, living for the most part on reservations and in increasing numbers in the cities.
6. Other ethnic groups which sometimes cut across racial boundaries, including European immigrants, Cuban refugees, and Eskimos in Alaska.

These racial or ethnic groups share many common characteristics that may stem from physical differences or from unique sub-cultural heritages developed to cope with environmental circumstances. However, the fact still remains that these groups constitute the major proportion of those characterized as culturally disadvantaged.

The major concern, however, should be the attitude of the more affluent (particularly educators) towards those who are disadvantaged, for this attitude perpetuates the syndrome of the disadvantaged and helps to keep them locked in their poverty. The condescending chain must be recognized and broken

if we hope to ever realize some of the vast potentials still untapped among this group.

WHO ARE THE GIFTED DISADVANTAGED?

Havighurst's definition of the gifted is all-encompassing, even of the gifted disadvantaged. He stated that "We shall consider any child gifted who is superior in some ability that can make him an outstanding contributor to the welfare of and quality of living in society."

Stallings (1972) goes a step further and defines gifted according to two groups. The "first order gifted" applies to the extremely gifted child, or the student in the upper one percent of his class. This child is recognizable in any community whether urban or suburban, regardless of socio-economic circumstances. Even in a disadvantaged school he excels both in traditional and environmental methods of testing. He is able to discern differences, recognize similarities, synthesize and generalize better than his peers; or he may be average in these categories but still show outstanding ability in other valuable areas.

The second classification is the "second order gifted." He is less easily recognized especially in traditional methods of testing. But it may be due to the failure of classroom activities to stimulate and challenge his creativity.

Therefore, Stallings classifies as gifted only those disadvantaged students who score well above the average on cognitive, affective, and psychomotor tests, be they traditional or environmental. Those students who show talent in a specialized

area he called "talented." Those who demonstrate exceptional ability in applied performance he called "high potential."

Stallings made the following comments on identification of disadvantaged students.[1]

1. Traditional methods of testing may be highly predictable in surfacing "first order gifted" students but evaluation of "second order gifted" with traditional methods of testing may lead to confusion.

2. Traditional as well as "teacher developed" methods of evaluating urban disadvantaged students should be developed as screening instruments.

3. Teachers are encouraged to develop environmental methods of testing as screening instruments which utilize the radius of the child's community as the contents of a screening instrument.

4. Peer evaluation which may be gathered by class feedback in the form of a sociogram is another way of identifying gifted disadvantaged children.

CHARACTERISTICS OF THE GIFTED DISADVANTAGED

The literature is replete with characteristics of the disadvantaged child. Many writers, in addition, urge thinking of these characteristics as positives rather than negatives as they are frequently noted, that can be cultivated for increasing the potentials or achievements among disadvantaged children. A few of these listings of characteristics are summarized here.

Torrance (1972) has outlined the following creative positives of disadvantaged children and noted that these characteristics occurred to a high degree and with a high frequency among disadvantaged children:

1. Ability to express feelings and emotions
2. Ability to improvise with commonplace materials

3. Articulateness in role-playing and storytelling
4. Enjoyment of and ability in visual art - drawing, painting, sculpture, etc.
5. Enjoyment of an ability in creative movement, dance, dramatics, etc.
6. Enjoyment of and ability in music, rhythm etc.
7. Expressive speech
8. Fluency and flexibility in non-verbal media
9. Enjoyment of and skills in group activities, problem-solving, etc.
10. Responsiveness to the concrete
11. Responsiveness to the kinesthetic
12. Expressiveness of gestures, "body language," etc.
13. Humor
14. Richness of imagery in informal language
15. Originality of ideas in problem-solving
16. Problem-centeredness
17. Emotional responsiveness
18. Quickness of warm-up

It is to be noted that he feels that the above qualities can be regarded as positives or strengths that can be capitalized upon to facilitate learning and achievement.

Reissman cited several positives of the culturally disadvantaged that might be used in structuring positive experiences for capitalizing on potentials:

1. Cooperativeness and willingness to give mutual aid;
2. Love of independence;
3. Enjoyment to be found in music, games, and sport activities;
4. Belief in both the desirability and worthwhileness of expressing one's feelings, be they anger or joy;
5. Concern for the tangible;
6. Interest in the externals to self, rather than the self per se;
7. Greater concern for the spatial than the temporal;
8. Admiration of the aggressive over the passive;
9. Desire for the problem-centered or the practical as opposed to the abstract theoretical; and
10. Tendency toward the physical and visual as approaches to learning.

In her discussion of programming, Baldwin (1973) described gifted disadvantaged children as having a capacity for abstract, divergent thinking along the higher levels of the vari-

ous hierarchial arrangements which is outstandingly different from and greater than that of the average child; therefore, planning in these categories, that is, objectives and learning activities, should reflect, over a period of time, emphasis in these areas. Said differently, she suggested that we want to make sure we stretch those young minds.

In dealing with the gifted disadvantaged child, Baldwin notes the following three precautions that should be noted:

1. Capability for operating at higher levels of the thought processes does not preclude the lack of need for development in the lower levels. It is only that these children will need much less time to develop the lower level thought processes, i.e., memory, comprehension, etc.;

2. Disadvantaged gifted children often exhibit their innate abilities in ways which are not always standard. It is important that we understand the intellectual skills being used in the exhibited behaviors, and the cultural context of its origin. We then build on those areas of strength and develop those areas of weakness. This student then should be directed to develop horizontally those special skills he possessed at his "entry level" while being directed vertically on those skills in which he was weak; and

3. the gifted disadvantaged child will need more initial support in his new opportunities to explore.

For children who come from lower socio-economic levels, certain characteristics are reported that may affect test performance in general and the accuracy or precision of test results in particular. Though the reported characteristics are not always consistent from one investigation to another, it is hypothesized that in contrast to the middle-class child, the lower-class child will tend towards the following:

1. be less verbal
2. be more fearful of strangers
3. be less self-confident
4. be less competitive in the intellectual realm
5. be more "irritable"
6. be less conforming to middle-class norms of behavior and conduct
7. more apt to be bilingual
8. be less exposed to intellectually stimulating materials in the home
9. be less varied in recreational outlets
10. be less knowledgeable about the world outside his immediate neighborhood
11. be more likely to attend inferior schools.

Such characteristics - even if only some of them apply to each "deprived" minority group - will undoubtedly be reflected in test-taking and test performance.

The report from which the above materials came,[2] gives further guidelines to be observed when using traditional tests with disadvantaged children.

SUMMARY

This paper has attempted to briefly describe some of the characteristics of disadvantaged potentially gifted children that might affect their performance in an educational environment and cause them to go unnoticed. The chief responsibility rests with those who design and implement programs for the gifted. They must be dedicated to look beyond traditional tests for identification of those youngsters whose native curiosity, originality, imaginativeness, inquisitiveness and conceptual and analytical thinking is indicative of potentials to achieve. They must also be constantly aware that an impoverished background does not mean that a child is incapable of achieving, of being resourceful or of demonstrating initia-

tive in the pursuit of educational interests. They must be the unbiased catalyst to stimulate the talented and gifted disadvantaged student to realize his potentials for the betterment of himself and for the benefits to our society.

FOOTNOTES:

1. Comments on environmental testing as referred to in this summary of an article by Stallings apply to research that he has conducted in development of an environmental testing instrument for identifying the gifted disadvantaged child. He has field tested this instrument on urban students in Hartford, Connecticut, and in San Diego, California.

2. Fishman, Joshua A., Chairman. "Guidelines for Testing Minority Group Children," prepared by a work group of the Society for the Psychological Study of Social Issues, Journal of Social Issues, April 1964, XX, No. 2, 129-145.

SUGGESTED READINGS:

1. Barnes, Edward, "IQ Testing and Minority School Children: Imperatives for Change", National Leader Institute, Teacher Education/Early Childhood, The University of Connecticut, Technical Paper, Storrs, Connecticut.

Abstract: Dr. Barnes' paper tells why wise school people are turning away from IQ tests for minority children and offers solid alternatives to these tests.

2. Hyram, George H., Socio-Psychological Concepts Relating to Teaching the Culturally Disadvantaged. (Brooklyn, N. Y., Pageant-Poseidon, Ltd.), 1972.

Abstract: This book is volume I of a trilogy called Challenge to Society: The Education of the Culturally Disadvantaged Child. Volume I represents the content and procedures of an experimental program for teachers offered as one means through which teachers of the culturally disadvantaged might be led to achieve a new perspective of their roles as teachers: a newer and more realistic concept of the potentialities of the children they teach and higher ultimate hopes for these learners.

3. Johnson, Kenneth R. Teaching the Culturally Disadvantaged: A Rational Approach. (Palo Alto, California, Science Research Associates, Inc.), 1970.

Abstract: The purpose of this book is to provide teachers of culturally disadvantaged children with realistic and practical guidance, and to improve human relations and understanding among all who are engaged in the educational process from kindergarten through the twelfth grade. Specific objectives include:

1. To help teachers acquire some understanding of the groups of culturally disadvantaged children in American classrooms. Understanding these children is essential to teaching them.
2. To offer suggestions and techniques for teaching the culturally disadvantaged child.
3. To stimulate thought and promote discussion among teachers of culturally disadvantaged children.

4. Frierson, E. C. "A study of selected characteristics of gifted children from upper and lower socioeconomic backgrounds." Unpublished doctoral dissertation, Kent State University, 1964.

Abstract: A study conducted with gifted students from different social class backgrounds. Findings showed a close similarity in personality patterns, but the gifted disadvantaged showed less superego development or self-discipline and preferred sports and games to reading. Despite this finding, however, the lower class gifted showed clear preferences for reading over the lower class average child.

5. Torrance, E. Paul. "Training Teachers and Leaders to Recognize and Acknowledge Creative Behavior Among Disadvantaged Children." The Gifted Child Quarterly, Volume XVI, No. 1, Spring, 1972.

Abstract: This article describes the essentials and summarizes the highlights of an evaluation of a design developed by Torrance for training teachers to recognize, acknowledge, and use the creative positives of disadvantaged children.

REFERENCES:

Bailey, Larry J. and Stadt, Ronald W. Career Education: New Approaches to Human Development. (Bloomington, Illinois: McKnight Publishing Company), 1973, pp. 132-166.

Baldwin, Alexinia. "Instructional Planning for Gifted Disadvantaged Children " National Leadership Institute/Teacher Education, The University of Connecticut (Technical Paper), September, 1973.

Cooke, Gwendolyn J. "Guidance Services for Gifted Disadvantaged Children and Youth," National Leadership Institute/ Teacher Education, The University of Connecticut (Technical Paper), March 1974.

Fishman, J. A. Deutsch, M., Kogan, L., North, R., and Whiteman, M. "Guidelines for Testing Minority Group Children," Journal of Social Issues, 1964, 20, 129-145.

Havighurst, R. J. "Who are the socially disadvantaged?" Journal of Negro Education, 1964, 33, 210-217.

Hyram, George H. Challenge to Society: The Education of the Culturally Disadvantaged Child, Volume I. (Brooklyn, N.Y.: Pageant-Poseidon, Ltd.), 1972.

Johnson, Kenneth R. Teaching the Culturally Disadvantaged. (Palo Alto, California: Science Research Associates, Inc.), 1970.

Riessman, Frank. The Culturally Deprived Child. (New York: Harper and Row Publishers), 1972.

Stallings, Clifford. "Gifted Disadvantaged Children," National Leadership Institute/Teacher Education, The University of Connecticut (Technical Paper), March 1972.

TALENT POTENTIAL IN MINORITY GROUP STUDENTS

JOSEPH S. RENZULLI

It seems probable that our society discovers and develops no more than perhaps half its potential intellectual talent.
Robert J. Havighurst (1961)

There can be little doubt that our nation's largest untapped source of human intelligence and creativity is to be found among the vast numbers of individuals in the lower socioeconomic levels, particularly among the approximately 20 million black Americans. It would be a monumental task to explore all of the causes that have contributed to our failure to discover, stimulate, and make the most efficient use of this neglected source of talent. Intensified efforts to overcome this failure are based in part on the simple realization that an invaluable natural resource is being wasted daily by a system of education that has shut its eyes and turned its back on the children of the poor. The by-products of this waste are evident in unprecedented urban turmoil, in unemployment and underemployment, in rising crime and delinquency rates, and most importantly, in the human despair that accompanies thwarted expression and creativity.

Although massive efforts have been directed toward overcoming the inadequacies of educational programing for the culturally disadvantaged, relatively little attention has been focused on those youngsters within the total population of disadvantaged youth who have unusually high potentials for learning and creativity. The numerous compensatory programs that deal mainly with remediation in the basic skill areas and preparation for entrance into the labor market generally have overlooked the talent potential that exists in lower socioeconomic and minority group youngsters. A number of persons have called attention to the dimensions of this untapped source of talent (Douglass, 1969; Torrance, 1968), and few would disagree that the time is long overdue for a systematic nationwide effort in talent retrieval. This article describes the dimensions of the talent potential among low socioeconomic and minority group members, and explores some of the issues and strategies involved in identifying talent potential and constructing educational programs which will maximize the development of this unidentified and understimulated segment of our school population.

Reprinted, with permission, from Exceptional Children, March 1973.

THE NATURE AND SCOPE OF TALENT LOSS

What exactly are the dimensions of the talent potential among minority groups, and what will be the costs of further delay in providing opportunities for the expression of such potential? A large body of accumulated research clearly indicates that gifted and talented children can be found in all racial groups and at all of society's economic levels. With respect to family background, Terman's (1925-1959) study of gifted children showed that, in actual numbers, the nonprofessional segment of the general population contains more than twice as many gifted children as the professional group. Regarding racial and ethnic origin, Miles (1954) reported that many high IQ black children can be found in black communities. Studies by Jenkins (1948) and Witty and Jenkins (1934) indicated that race per se is not a limiting factor in intellectual development, that black children with high IQ's come from a variety of backgrounds, and that educational achievement of highly able black children resembles that of other gifted youngsters. In more recent years, the works of Hunt (1961), Bloom (1964), and others have called attention to the significant role that environment plays in intellectual development. The massive number of research studies summarized in these works have crucial implications for the role that education can and should play in developing the high potential of youngsters from all races and social classes.

In addition to those studies concerned mainly with the older or more traditional definitions of giftedness (i.e., giftedness in terms of IQ, a rapidly expanding body of literature dealing with a broader conception of talent development has recognized that children from depressed areas, low income groups, and racial minorities probably represent our largest unmined source of creative talent (Passow, 1966; Torrance, 1968). The importance of identifying and developing creative talents at all levels of society has caused leading philosophers and educators to focus their attention on this problem. In an article entitled, "Is America Neglecting Her Creative Minority?" Toynbee (1964) commented:

> To give a fair chance to potential creativity is a matter of life and death for any society. This is all-important, because the outstanding creative ability of a fairly small percentage of the population is mankind's ultimate asset, and the only one with which only man has been endowed (p.4).

It cannot be denied that society stands to benefit from a systematic investment in the development of this vast source of untapped talents; yet, major inequalities of opportunity are still evident in our schools. The inferiority of existing

schools for low income and minority group children has been indicated clearly by studies which show that the longer children stay in these schools, the further behind they become in achievement and the wider the gap grows between what they should know and their actual level of performance (Coleman, Campbell, Hobson, McPartland, Mood, Weinfeld, & York, 1966; Sexton, 1961). Average drops in measured intelligence of as much as 20 points have been recorded as black children progress (or perhaps it should be regress) through grades (Passow, Goldberg, & Tannenbaum, 1967). Other studies dealing with delinquency, level of aspiration, self concept, aggressiveness, alienation, and a host of other variables reveal similarly ominous findings about the current state of the school situation for disadvantaged youngsters (Coleman et al., 1966; Mathis, 1969; Williams & Byars, 1968). Under circumstances such as these, even the most highly able and well motivated students from minority groups surely must lose faith in a system where the probability of nonsuccess is so high.

In spite of these grim statistics, there is a growing realization that a wealth of creative talent is lying unidentified and understimulated in schools that serve urban ghetto and rural poor youngsters. The decade of the 1960's may well be remembered as a period in our history when the education establishment began to pay serious attention to the detrimental effects which result from the inferior opportunities that exist for a large segment of our population. Books such as How Children Fail (Holt, 1966), Death at an Early Age (Kozol, 1967), Pygmalion in the Classroom (Rosenthal & Jacobson, 1968), and Crisis in the Classroom (Silberman, 1970) have literally shocked us into the reality of the situation. If we look upon the activities and pronouncements of the Sixties as the first step in a direct frontal attack upon the problem of educational equality, then the heightened interest of that decade certainly can be regarded with optimism. But our view should not be blurred by such optimism; for scattered attempts to "do something" for the culturally disadvantaged thus far represent little more than the proverbial "drop in the bucket" when compared to the great number of youngsters whose day to day school experience is nothing short of an educational and psychological disaster. If, on the other hand, the ground work laid during the Sixties has not been a false start, then action to correct this crucial problem in our schools remains the challenge and the task before us. The remainder of this article deals with some of the work that has been done in the area of identifying talent potential among low socioeconomic and minority group youngsters and developing educational programs to help this talent potential be realized.

IDENTIFYING TALENT POTENTIAL

A number of psychologists and educators who have wrestled with the problem of defining human abilities have advanced the thesis that a variety of talents contribute to the accomplishments of man. Early definitions of giftedness based solely on measures of intelligence have largely ignored the existence of a much broader spectrum of highly valuable human characteristics. In view of the heavy cultural loading of most standardized tests of intelligence and achievement, it is apparent that an identification process that depends mainly on traditional measures of performance will discriminate against youngsters who have not participated fully in the dominant culture. Attempts to circumvent this problem through the construction of culture free or culture fair intelligence tests have failed to yield measures that neutralize the influence of important factors in mental growth, such as perceptual and linguistic deprivation, the repression of constructive play activities, family insecurity and limited adult role models, and the effects of inferior school experiences. Thus, it seems safe to conclude that both traditional tests and so called culture free tests have had the effect of creating a limited conception of the abilities which our society values. Both reflect the emphasis which the dominant culture and formal education place on the ability to deal effectively with language, symbols, and abstraction.

A Broadened Conception of Talent

In recent years a growing number of theorists and researchers have provided us with a much broadened conception of the nature of human abilities. Foremost among the newer models is the well known structure of the intellect cube developed by Guilford (1967) and his associates. This model consists of a three dimensional classification system designed to encompass and organize 120 possible talents according to (a) the type of mental operation employed, (b) the content involved in the thinking process, and (c) the type of product which results from the act of thinking. Williams and Eberle (1967) developed a similar model which identified 23 classroom teaching strategies that can be used to develop seven productive thinking operations in various subject matter areas, while Taylor's (1968) multiple talent model isolated an additional set of distinguishable abilities in areas such as creativity, decision making, planning, forecasting, and communications.

Taylor suggested a grouping of talents based on the world-of-work needs and pointed out that if we limit ourselves solely to academic talent, only the top 10 percent will fall into the

highly gifted class and only 50 percent of our students will have a chance to be above average (i.e., above the median). On the other hand, if we measure students across several different talents, the percent of highly gifted students will increase tremendously:

> When we arrange a group of students on each of several talent ladders, those at the the old academic talent ladder - those heretofore labeled "educationally deprived" - will rise as a subgroup to be almost average as far as each of the other five types of talents are concerned. A third or more of them are likely to be above average on each new talent ladder. Since we have not been reaching these students, we should try eliciting as many different talents as possible. If we succeed, then those who had not been flourishing in the old talent area will discover some areas where they are promising individuals and perhaps even star performers (Taylor, 1968, p. 68).

Thus, the application of a multiple talent approach in our schools will result in greater numbers of students achieving higher degrees of success both in and out of school. According to Taylor, a natural by-product of this approach will be an increase in the student's individuality. Each student will experience and display his own unique profile across talents and will thus become more self directed.

Suggestions for Identification of Multiple Talents

The taxonomies developed by Bloom (1956) and Krathwohl, Bloom, and Masia (1964) provide another classification system for isolating cognitive and affective processes that clearly identify dimensions of man's repertoire of behaviors. These behaviors often are not measured by traditional tests of intelligence or are "buried" in the general scores which many of these tests yield. A good example is the limited range of abilities sampled by the Scholastic Aptitude Tests (SAT). According to a recent report by the Commission on Tests (1970), the SAT has been found to be mainly a measure of developed verbal, mathematical, and reasoning abilities, and thus, it fails to take account of the educational potential of college applicants who for one reason or another have been educationally disadvantaged. The Commission has recognized the need for a broader conception of college admission criteria and has suggested that the SAT be expanded to include measures of the following abilities:

1. Adaptation in new learning situations.
2. Problem solving in situations that require

3. Analysis, search, and synthesis behaviors.
4. Information management, processing, and utilization skills.
5. Nonstandard information pools.
6. Comprehension through experiencing, listening, and looking, as well as reading.
7. Expression through artistic, oral, nonverbal, and graphic, as well as written symbolization.
8. Charteristics of temperament.
9. Sources and status of motivation.
10. Habits of work and task involvement under varying conditions of demand (Commission on Tests, 1970, vol. 2, p. 44).

The Commission further suggested that test procedures should be redesigned (a) to broaden the varieties of subject matter, competencies, and skills assessed; (b) to examine achievement in a variety of contexts; (c) to make greater use of openended and unstructured indicators of achievement; and (d) to assess nonacademic achievement such as social competence, coping skills, avocational skills, and artistic, athletic, political, and mechanical skills.

With these and other models to assist in defining and classifying a variety of human abilities, the next step should consist of the selection or development of appropriate instruments to identify a broad range of talent potential. Bruch (1971) suggested using Guilford's model to diagnose different patterns of abilities reflected in existing test items and to specify factors and clusters of factors that represent the strengths and weaknesses of particular individuals or cultural groups. Tests then could be designed to fit cultural strengths, and such tests could be used to measure both conventional abilities and those talents which are valued most by an individual's own culture. Bruch further suggested a case study battery for the identification of gifted disadvantaged youngsters that would include a profile of their strengths and developmental needs, ratios of time in school to developmental levels and achievement levels, and an analysis of positive and negative factors (both sociocultural and personal) which either enhance or inhibit further development of talents.

Torrance Tests of Creative Thinking

Additional strategies for identifying hidden talent among the disadvantaged have been developed by Torrance (1969). Through the use of instruments such as the Torrance Tests of Creative Thinking (Torrance, 1966), youngsters are given an opportunity to respond in terms unique to their own culture.

Such an approach avoids the problem of evaluating the child through experiences that are common to the dominant culture, and at the same time, helps to create a psychologically safe atmosphere which will motivate him to put forth his greatest effort. On the basis of research studies carried out with disadvantaged groups, Torrance (1964, 1967) has identified the following set of creative characteristics which he found to occur with relatively high frequency among disadvantaged children:

1. High nonverbal fluency and originality.
2. High creative productivity in small groups.
3. Adeptness in visual art activities.
4. High creativity in movement, dance, and other physical activities.
5. Ability to be highly motivated by games, music, sports, humor, and concrete objects.
6. Language rich in imagery.

Research conducted by Torrance and his associates over a period of 12 years has led to the conclusion that children of economically deprived and minority cultures seemed to perform as well as those from any other group. In a recent review of the literature dealing with the use of the Torrance Tests of Creative Thinking, Torrance (1971) summarized the results of 15 research studies which focused on the creative abilities of low socioeconomic and minority group children. Generally, these studies indicated that although whites surpassed blacks on verbal measures, there were no significant differences on scores of figural fluency, flexibility, and originality; and in some cases, the so called disadvantaged groups surpassed the middle class groups. Although measures of intelligence have been found consistently to correlate positively with socioeconomic status, the research summarized by Torrance seems to indicate that creativity bears little relationship to factors such as race, social class, and level of parental education. Thus, a convincing argument is presented for a relatively culture free method of identifying a bountiful supply of creative talent. Torrance expressed the belief that in many ways the life experiences of low socioeconomic youngsters may actually be more supportive of creative achievement than the experiences of more advantaged children.

> Their lack of expensive toys and play materials contributes to their skill in improvising with common materials. The large families and life styles of disadvantaged families develop skills in group activities and problem-solving. Positive values placed by their families on music, rhythm, dance, body expressiveness, and humor keep alive abilities and sensibilities that tend to perish in more advantaged families (p. 79).

Biographical Indices

The recently developed Alpha Biographical (Institute for Behavioral Research in Creativity, 1968) provides another strategy for identifying creative talent among disadvantaged and minority group youngsters. This instrument, consisting of 300 items through which an individual is asked to describe himself and his background, is based on the belief that past behavior, experiences, and self descriptions can be used as indicators of future performance. A number of research studies carried out by the developers of the Alpha indicate that it can be used as an aid in identifying a number of different talents which are important for both academic performance and performance in a variety of work situations. The significance of this instrument lies in the fact that creativity scores and scores on a number of other factors bear little or no relationship to race. In other words, for certain abilities, the Alpha does not discriminate against persons from racial minorities.

The Sub-Cultural Indices of Academic Potential (SCIAP, Grant & Renzulli, 1971) is another instrument designed to take account of problems of test bias, the cultural distinctiveness of minority group members, and the growing concern on the part of high schools and colleges to identify high potential minority group students for supportive educational programs. The instrument consists of 145 items which ask students to indicate how they feel about themselves and how they would react in situations that are common to their every day experiences. There are no right or wrong answers to the SCIAP items, but rather, the instrument yields a profile that points out student preferences and learning styles in areas such as: the organization and management of information, commitment to social responsibility and leadership, flexibility in social situations, originality in cultural context, initiative and persistence, self concept, attitudes toward education, and support of family and school toward continuing education.

Language and Development Considerations

Two additional considerations should be pointed out in discussing the issue of identification. First, one of the major characteristics of the disadvantaged is their inability to master the linguistic and grammatical structures of the dominant culture. For this reason it is necessary to develop identification strategies which are not language dependent. Furthermore, because most youngsters have a greater facility with the spoken rather than the written word, it is especially

important that the disadvantaged child not be required to "write down" all of his responses. Tape recorders or human recorders can serve in uncovering higher forms of thinking which might otherwise go undetected because of limited writing ability.

Finally, the identification of talent potential among the disadvantaged should be a continuous process that begins in the early years and that is carried out with unusual frequency. Until more and better predictive instruments are available, talent searches should take place in the classroom on a regular basis. Because of the dynamic nature of abilities such as creativity, efforts to make long range predictions should be replaced with frequent assessments of a variety of talents. These assessments should be followed by carefully designed classroom activities which are constructed specifically to enhance those talents which have been identified.

DEVELOPING TALENT POTENTIAL

Although strategies for identifying different types of human abilities are in varying stages of maturity, enough is known about developing talent potential to allow us to do some systematic programing in this area. Two major factors in the development of outstanding abilities are (a) the characteristics of the teacher and (b) the relevancy of the curriculum.

Teacher Characteristics

One major generalization about teacher characteristics stands out from the vast amount of recent literature dealing with programing for the disadvantaged: "Experienced teachers who feel personal satisfaction in working with disadvantaged students are the key to successful compensatory education in poverty area schools (Phi Delta Kappan, 1970, p. 338)." This was the finding of a study which investigated 32 programs reporting substantial improvements in the achievement of low income students. Thus, careful teacher selection appears to be a major consideration in programing for the disadvantaged. Furthermore, in situations where talent development is a primary goal, it is especially important to select teachers who are committed to the task of working with disadvantaged youngsters in the development of a variety of talents. Teachers without such knowledge are likely to approach talent development in a piecemeal and haphazard fashion.

Space does not permit a detailed discussion of the several approaches to talent development which can be found in the literature (see for example, Gregory, 1967; Parnes & Harding,

1962; Williams & Eberle, 1967); however, two general suggestions are offered as necessary first steps for systematic programing in this area. First, the teacher should have a functional knowledge of one or more of the models described above. Using the model(s) as a guide enables the teacher to plan a wide variety of activities that are designed to nurture specific talents. If teachers are unaware of the behavioral characteristics and dimensions of various types of abilities, it seems unlikely that they will be able to plan purposeful activities to promote the development of these abilities.

A second suggestion relates to knowledge about specific strategies that have already proved their usefulness by promoting creative problem solving in business and industry. Techniques such as attribute listing, morphological analysis, brainstorming, and forced relationships are easy to learn and readily adaptable to a variety of classroom situations. However, it is the teacher's initiative in applying these techniques that will make the difference between an exciting, "mind expanding" experience and a routine classroom activity. The teacher who is coverage dominated, i.e., one who judges his effectiveness by the number of chapters or units that he covers during a given period, probably will never find time to develop abilities other than the so-called basic skills.

Relevancy of the Curriculum

While remediation in the basic skill areas must be an important goal of compensatory education, it should not, of course, be the only objective of the programs which serve the disadvantaged youth. Activities for talent development can be built into areas of the curriculum, and because of the inherent fun and excitement of activities such as the type described above, added dividends are likely to accrue in the form of increased motivation and improved performance in the basic skills of learning.

High potential disadvantaged youngsters are vitally interested in the social changes taking place around them in their neighborhoods and in the society at large. Thus, it is little wonder that they get "turned off" by a curriculum which deals with the exports of Brazil and the names of Columbus' ships when rallies against racism and demonstrations in Washington are the real issues with which they would like to deal. These issues provide excellent opportunities for constructing activities that promote decision making and social leadership skills. Exercises which encourage imaginative solutions to real life problems have a much greater likelihood of promoting creativity than the time worn chore of writing a story about "what I did last summer."

In their book, Compensatory Education for the Culturally Disadvantaged, Bloom, Davis, and Hess (1965) called attention to the importance of curricular relevancy by listing the following objectives as one of the four major goals of education for the disadvantaged:

> Increasing stress must be placed on those aspects of interests, attitudes, and personality which will promote the further growth of the individual, enable him to find satisfaction in the things he does, and help him to find meaning and fulfillment in his life. The effects of automation, the shorter work week, urban living, and the fast pace of change on the national as well as international scene require individual character development which will enable each person to live with himself and with others under conditions very different from those which have prevailed (p. 3).

A somewhat simplified and yet operational definition of a relevant curriculum is: a set of experiences which deal with topics and issues that youngsters would talk about if given a free choice. If we are really serious about a process centered rather than content centered curriculum (and experiences that attempt to promote specific talents certainly must be considered process oriented), then the issues that youngsters prefer to talk about, those that they discuss before and after the school bell rings, provide fertile ground for the development of a wide range of talents.

BASIC ELEMENTS OF A TOTAL PROGRAM OF TALENT DEVELOPMENT

Although highly qualified teachers and relevant curricular experiences are considered to be major factors in programing for high potential youngsters, a total approach to talent development also should include a number of other characteristics. Douglass (1969) pointed out four essential elements of an ideal system for maximizing the talent potential of low socioeconomic and minority group members.

The first element is greater flexibility in the ways in which schools are operated and performance is evaluated. The classroom unit must be broken down into small learning modules where individuals and small groups become the main focus of instructional efforts. Although the school may continue to serve as a "home base" for the learning process, Douglass suggested that early in the elementary school years students should be provided with extended periods of learning time in institutions that usually are not considered schools:

> These would include places where knowledge is stored, such as art museums, science institutes, and libraries ... places where knowledge is being put to work, such as farms, hospitals, airports, machine shops, sheet metal works, and construction ... places in which some kind of education or learning or on-the-job training is under way ... places where knowledge is being discovered such as research institutes and laboratories (Douglas, 1969, pp. 10-11).

The second element would consist of an early start in the education and socialization processes. Low socioeconomic group children often enter school with the accumulated deficits that result from poor nutrition and limited stimulation in infancy and early childhood. These deficits may lead to intellectual inhibition and an inability to take advantage of the educational opportunities that may be open to them in later life. Douglass advocated a program of nursing schools and day care centers where each child will be assured of services of professionals and paraprofessionals who are knowledgeable about early childhood experiences that are beneficial to later development. These centers might be located throughout the community in schools, hospitals, or factories, and they should provide continuing education programs for parents and substitute parents.

An early apprenticeship is the third element of a total program of talent development. Beginning at an early age, students should be given frequent exposure to different ways of making a living and of participating in leisure time activities. Too often, children from low socioeconomic group families have no real contact with a father figure or they see their parents employed only in lower level occupations. They have little opportunity to observe the variety of talents used in the broad spectrum of occupations, and thus, they have a limited conception of the many kinds of talents that are valuable to our society and available for their exploration. Early apprenticeship programs would help youngsters to see the real world's conception of talent rather than the school's traditionally limited concern for only academic ability.

A final element which is necessary in the development of talent potential is the creation of a more open system. The grade by grade progression has failed to meet the needs of students who do not "fit in" at the start or who are not willing to "play the game" by the existing rules. If we truly respect the individual differences and preferences of all people in our society, then we should not force them to follow a relatively prescribed system of learning. Students should be free to alternate school and work experiences with other experiences which they may wish to pursue. They should be free to drop out of school for a given period of time and allowed to reenter the

system without fear of punitive action or relegation to programs which are essentially remedial in nature. Access to first rate educational programs should be readily available to every person at every stage of development regardless of his previous success or lack of success in the system. A more open system will allow adults as well as young people to have an opportunity to explore and develop talents that may have been thwarted earlier in life.

REFERENCES

Bloom, B.S. Stability and change in human characteristics. New York: John Wiley & Sons, 1964.

Bloom, B.S. (Ed.) Taxonomy of educational objectives. Handbook I: Cognitive domain. New York: David McKay, 1956.

Bloom, B.S. Davis, A., & Hess, R. Compensatory education for cultural deprivation. New York: Holt, Rinehart & Winston, 1965.

Bruch, C.R. Modification of procedures for identification of the disadvantaged gifted. Gifted Child Quarterly, 1971, 15, 267-272.

Coleman, J.S., Campbell, E.Q., Hobson, C.J., McPartland, J., Mood, A.M., Weinfeld, F.D., & York, R.L., Equality of educational opportunity. Washington, D.C.: USGPO, 1966.

Commission on Tests. I: Righting the balance, II: Briefs. New York: College Entrance Examination Board, 1970.

Douglass, J.H. Strategies for maximizing the development of talent among the urban disadvantaged. Paper presented at the annual meeting of The Council for Exceptional Children, Denver, Colorado, April, 1969.

Grant, T.E., & Renzulli, J.S. Sub-cultural indices of academic potential. University of Connecticut, 1971.

Gregory, C.E. The management of intelligence. New York: McGraw-Hill, 1967.

Guilford, J.P. The nature of human intelligence. New York: McGraw-Hill, 1967.

Havighurst, R.J. Conditions productive of superior children. Teachers College Record, 1961, 62, 524-531.

Holt, J. How children fail. New York: Dell, 1966.

Hunt, J. McV. Intelligence and experience. New York: Ronald Press, 1961.

Institute for Behavioral Research in Creativity. Alpha Biographical Inventory. Greensboro, N.C.: Prediction Press, 1968.

Jenkins, M.D. The upper limit of ability among American Negroes. Scientific Monthly, 1948, 66, 339-401.

Key to compensatory education. Phi Delta Kappan, 1970, 58, 338.

Kozol, J. Death at an early age. Boston: Houghton-Mifflin, 1967.

Krathwohl, D.R., Bloom, B.S., & Masia, B.B. Taxonomy of educational objectives. Handbook II: Affective domain. New York: David McKay, 1964.

Mathis, H.I. The disadvantaged and the aptitude barrier. Personnel and Guidance Journal, 1969, 47, 467-472.

Niles, C.C. Gifted children. In L. Carmichael (Ed.), Manual of child psychology. New York: John Wiley & Sons, 1954.
Parnes, S.J. & Harding, H.F. (Eds.) A source book for creative thinking. New York: Charles Scribner's Sons, 1962.
Passow, A.H. The talented among the disadvantaged. Accent on Talent, 1966, 1, 3-7.
Passow, A.H., Goldberg, M, & Tannenbaum, A.J. Education of the disadvantaged. New York: Holt, Rinehart, & Winston, 1967.
Rosenthal, R., & Jacobson, L.F. Pygmalion in the classroom. New York: Holt, Rinehart, & Winston, 1968.
Sexton, P.C. Education and income. New York: Viking Press, 1961.
Silberman, C.E. Crisis in the classroom. New York: Random House, 1970.
Taylor, C.W. Be talent developers...as well as knowledge dispensers. Today's Education, 1968, 57, 67-69.
Terman, S.M. Genetic studies of genius. Stanford: Stanford University Press, 1925-1959. 5 Vols.
Torrance, E.P. Education and the creative potential. Minneapolis: University of Minnesota Press, 1964.
Torrance, E.P. Torrance Tests of Creative Thinking: Norms-technical manual. Princeton, N.J.: Personnel Press, 1966.
Torrance, E.P. Understanding the fourth grade slump in creativity. Athens: Georgia Studies of Creative Behavior, 1967.
Torrance, E.P. Finding hidden talents among disadvantaged children. Gifted Child Quarterly, 1968, 12, 131-137.
Torrance, E.P. How creativity development can awaken unrecognized potential. Paper presented at the conference on "Developing Unawakened and Unrecognized Potential" sponsored by the Minnesota State Department of Education, Minneapolis, April, 1969.
Torrance, E.P. Are the Torrance Tests of Creative Thinking biased against or in favor of "disadvantaged" groups? Gifted Child Quarterly, 1971, 15, 75-80.
Toynbee, A. Is America neglecting her creative minorities? In C.W. Taylor (Ed.), Widening horizons of creativity. New York: John Wiley & Sons, 1964.
Williams, F.E. & Eberle, R.F. Creative production in the classroom. Edwardsville, Ill.: American of Edwardsville, 1967.
Williams, R.L. & Byars, H. Negro self-esteem in a transitional society. Personnel & Guidance Journal, 1968, 47, 120-125.
Witty, P., & Jenkins, M.D. The educational achievement of a group of gifted Negro children. Journal of Educational Psychology, 1934, 45, 585-597.

A Proposed Rationale for the Identification and Development of the Gifted Disadvantaged

Catherine B. Bruch

University of Georgia

The issues involved in identification and development of the talented and gifted among disadvantaged populations are apparently centered on two basic points of view. One attitude is expressed by E. Paul Torrance (1969) who proposes that disadvantaged youth should be identified for their talents valued by their cultures. Another viewpoint might be called a traditional one, that the disadvantaged youngster should meet the criteria for giftedness within the majority culture.

Each position perhaps reflects the cultural tone of the current American scene at colleges and universities. Conflicts are also present within black communities between groups which emphasize respect for black culture and organizations urging mediation of issues and more in tune with the values of the dominant culture.

Therefore the decision about how to identify and develop the potentially more productive among the children in culturally different areas is a major issue not only evidenced in colleges and in public schools, but also in current social concerns. And, each culturally different group has its own set of cultural needs for encouragement of the productivity of its members. Witness in the recent news the various proposals to incorporate Black History into curricula, the black parents who wish the right to select the teachers of their children, and the Brown Berets in Los Angeles who organized to forward the case for the educational needs of youngsters of Mexican-American heritage. Other culturally different groups, although they have not become outspoken in their needs, nonetheless do have varied modifications in their educational disadvantages. For example, Appalachian children certainly live in a style different from that of inner city youths.

This paper is an attempt to formulate partial responses to some of the questions raised by E. Paul Torrance (1969) regarding identification of giftedness among disadvantaged groups. He discusses three issues in decisions related to college programs for high risk admissions: "Should we seek to identify and cultivate those kinds of talents that the dominant society

---

Reprinted by permission of Dr. Bruch.

values or look for talents of the type that are highly valued in the particular disadvantaged subcultures? Are there important kinds of talents commonly existent among disadvantaged subcultures? How early should attempts be made to identify and give special encouragement to outstandingly gifted children among disadvantaged subcultures? Is the time of college admission too late?"

The crux of the issue at public school levels lies in prediction of cultural values which will probably affect the particular disadvantaged child's ultimate productivity. Those who would identify the gifted in a disadvantaged group must define the group's values in talent and productive goals, and in addition should consider the degree to which function in the major culture will necessitate a broadening of abilities. That is, the criteria for identification should be specific to the disadvantaged culture's values for talent, and to some extent should include conventional criteria.

The usual identification of giftedness has been limited mainly to students' performances on ability and achievement tests. For the disadvantaged the identification question cannot be whether they perform on tests of IQ or achievement at a currently high level, but whether there are indices of probable development to higher levels than those at which they now function.

For example, a youth who had demonstrated exceptional talent in music, a culturally valued talent among the Negro disadvantaged, may also be able to function more fully through development of latent abilities in academic areas. Through his specific cultural talent, music, a developmental program could be built for the needed abilities in vocabulary fluency and comprehension, mathematical symbolic thinking, and other thinking processes. Identification procedures would be individualized through a school psychologist's analysis of the existing status of the youth's talents and abilities, and of his potentials for further development. Plowman (1968) included rural children as possibly deprived (culturally and educationally), and refers to individual testing as part of the identification process required for the gifted.

But, how can we analyze such future growth in disadvantaged children? Precisely what are the criteria? The so-called "culture-free" or "culture-fair" test is apparently not yet designed, if indeed it be possible (Guilford, 1967). Essentially we should probably find a means for tapping and measuring a quality of problem-solving abilities which are particular to a culture.

Whatever conventional instruments we use, we need to assess which portions of an instrument have any bearing upon factors which do relate to cultural strengths in the kinds of thought processes used. When the thinking powers of a culture have been defined through analysis of existing measures and careful observations, then appropriate tests for cultural gifts can be devised.

The Structure of Intellect Model (Guilford, 1967) offers a means for analysis of abilities under a theoretical framework. The model can also be used to diagnose different patterns of abilities reflected by specific test items (Meeker, in press). If the strengths of a particular cultural group could be specified in terms of factors on the Structure of Intellect, then tests could be designed to fit the cultural strengths. Instead of being "culture-free", such tests would be culture-oriented. We would be able to measure not only conventional abilities represented by IQ and achievement tests but also those talents by which a person is outstanding in his own culture.

The need for identification is now however. How can we choose those among the disadvantaged who probably have greater potentials for productivity in some field? As in other identification procedures for exceptional children, a case study battery for identification of the gifted disadvantaged youngster, may include: (1) a profile of his strengths; (2) a profile of his developmental needs; (3) a ratio representing his time in school (by days attended) and his ability developmental levels, and a ratio relating time in school to his achievement levels; (4) an analysis of positive and negative factors either enhancing or inhibiting his further development of talents, both socio-cultural factors and personal factors.

Probable Powers of the Disadvantaged

The fact that special talents or strengths of disadvantaged groups are discussed as a means for identification of bright disadvantaged children should not lead one to conclude that, for example, American Negroes have only special talents and are not also among those of the highest intelligence measured on our conventional intelligence tests. Jenkins (1948) concludes that there is no significant difference in psychometric intelligence between Negro and white groups. He states that although some of the most highly intelligent people are Negroes, there is a lower proportion of Negroes among the highly intelligent, and this is assumed to be the result of environmental inhibitions. Bond (1957) concludes that the "culturally deprived" are disfavored by the usual verbal content of most examinations.

Let us look at the list of creative positives which Torrance (1969) describes:

1. High non-verbal fluency and originality
2. High creative productivity in small groups
3. Adept in visual art activities
4. Highly creative in movement, dance, and other physical activities
5. Highly motivated by games, music, sports, humor, and concrete objects
6. Language rich in imagery

Gordon (1968) strengthens Torrance's perceptions of the abilities of disadvantaged youth. He sees that in being less "word bound" disadvantaged youth may be free to do unstereotyped thinking that leads to creative problem solving. He speaks of Reisman, Irvin Taylor, and others who remark upon the resourcefulness, ingenuity, and creativity of many disadvantaged people. J. E. Gordon quotes E. Gordon[1] who describes disadvantaged youth as having "ingeniousness and resourcefulness in the pursuit of self selected goals and in coping with the difficult conditions of life peculiar to states of economic insufficiency and poverty, low social class status, and low social caste status," (Gordon, 1968, p. 138).

A report in the General Motors Publication, American Youth, (1968) tells of Bracie Watson who was an outstanding winner in the International Science Fair in 1968 in Detroit. Bracie took first place in the health and medicine categories in this fair, and received several other honorary and place awards for his development of an artificial womb in which he kept a tiny rat embryo alive, and other projects. Bracie is described by Dr. Edwin M. Weller, an embryologist at the University of Alabama's anatomy department: "Bracie is an improvisor, and he can see things spatially. In that area he has extraordinary creative possibilities. He isn't one of those people who need shiny instruments to do their work. He can generally create what he needs from very simple crude implements and this talent alone will pay off for him time and time again." Bracie is black.

Coffin, in a recent Look magazine article, pictures the person of Negro artist, Danny Johnson. She says "Johnson has a dream -- to channel the hostility of the ghetto young into creativity..." (Coffin, 1969, p. 69).

In a program directed toward the development of creative ghetto youngsters, George Witt (1968) selected children through the Torrance Tests of Creative Thinking. He then involved some of the community artists in a total program to develop these children. He describes multiple outcome of his three- and a half year program: many of the children's grades in school improved as an apparent corrolary to this out-of-school program; their emotional stability improved; of the twelve children chosen from ghetto housing, 10 were performing in the superior

range in intelligence at the end of the program period. Various improvements occurred in the economic status, the work status, and the general family status of the families whose children were involved. Siblings of the selected children also showed various improvements.

Social abilities appear as a consistent pattern of strength found among disadvantaged. Gleason (1968) discusses these abilities when he states "Struggle in the lower strata nurtures in many a youth a keen incisive intelligence that can recognize and seize upon opportunity, know the angles, size up the prospective customer (or victim), evade complications, and otherwise make his way in the hard environment", (pp. 214-215). He discusses how youths in disadvantaged areas show sophistication well beyond their middle-class contemporaries and insights into the dynamics and mechanics of the slum economy. Grier and Cobbs (1968) see black youth as possessing social flexibility in a complex ambiguous social organization. They also discuss the blacks' giftedness in business management and in their shrewd assessments of the world. Blacks are said to understand their environment better in order to soften the hostility of competition and to live through their wits in persevering to overcome a hostile environment.

Loyalty to the peer group is another one of the positive characteristics of inner-city slum adolescents. Gordon (1968) sees that poor youth have a special capacity for loyal and meaningful personal relationships. It is for this reason that group methods are suggested in preference to individuals methods with disadvantaged youths.

It behooves us to look at the Negro youth, for example, and his need for his expression of manliness as an asset rather than a liability. Assertiveness, initiative and constructive aggressiveness need to be rewarded among these youths, rather than overwhelmed so that they cannot express their needs for manliness. One of prime problems of educators is to provide black role models for whom learning is demonstrated as valuable and as a manly occupation. Manliness in sports and manliness in academic achievement should be exemplified together in black male teachers in order for the black youth to identify learning as a masculine activity, among the abilities which he must develop.

Among Negro youth, the body language expressiveness may be another instance of both interpersonal and physical abilities. Such body language asset should be useful if encouraged through dance and drama activities.

The expressiveness of Negro youth in language is found in the special patois, the special coding of peer group talk as "jive" or "hip" talk. Colorful and original figures of speech,

subtle nuances and double meanings are commonly found in the cultural language. For example, double meanings have been found since earlier days in the spirituals.

"It's a poor rat that don't have but one hole." (Grier and Cobbs, 1968) is a much less stagnant expression than some of the proverbs upon which Negroes are tested in standard IQ tests. The thinking processes necessary for abstracting meaning from the proverbs are the same, and the expressive version is more meaningful.

Musical innuendoes, as double meanings, show the originality of Negro jazz artists. The implications of the double meanings in language and in music tie in with the social intelligence already described as a way of getting around the existing cultural system. There is pride among the peers since they can "dig" the meanings but the members of the establishment are confused.

Perhaps a special component of black abilities is that which goes deeper than musical or rhythmic or cultural communications. A special capacity for joy, for feeling at a deeper level, is present. Emotions are more real and acceptable as jazz and soul are "honest" representations of feelings. Thus, access to emotions, spontaneous expressions of feelings, and greater freedom from stereotyped attitudes and behaviors may be the key to the freedom for Negroes to be creative.

Another strength of inner-city and rural youth may be their special powers of learning through observations and manipulations. Plowman points out that rural youth may have special understandings of nature. The same concept was discussed with the author recently by a teacher in the fringes of the Appalachian country who observed that her class of children (all white) were especially aware of natural things about them.

A supervisor of gifted programs in the mountains on the southern rim of the Appalachians pointed out that there is in those rural areas a special ability which you might call "amateur mechanics". She described how children in hill country could not get into town so often and had to learn, for example, to make machinery work with whatever was available.

The same ability to "make do" with the available resources may be found in inner-city children. Gordon (1968) points out how deprived children have a variety of discarded items and junk for their imaginative play period and that they develop a practical problem solving approach. A ten year old boy who maintains complex machinery is discussed also by Grier and Cobbs.

To summarize the lists of special abilities of disadvantaged gifted children, we find clusters around the general concept of creativity. These children appear to learn well creatively, to be innovators and initiators and problem solvers in their own culture. Yet we have seldom looked to these attributes of adaptability, originality, and problem solving for identification of disadvantaged gifted children and youth.

According to the Guilford (1967) Structure of Intellect Model, the strengths of the disadvantaged youth would appear to lie in these specific areas: the content areas of figural strength (visual, auditory, and kinesthetic), and behavioral power (social intelligence); the operations of cognitions (a special kind of knowledge seldom measured by conventional tests), of convergent thinking (a kind of logical reasoning particularly emphasizing planning ability), and obviously the divergent problem solving ability which comes closest to creativity. As to strengths in the various Guilford products categories, the disadvantaged gifted probably excel in systems and transformations, or the abilities to produce complicated patterns and to change or adapt ideas.

Note that in Figure 1 the most frequently mentioned abilities in the literature have been darkened for the full column as "powers". Those factors which apply only in special cases or in special kinds of cases have been only partially darkened.

Abilities Which May Need Encouragement for Development

Also note in Figure 1 the areas which have not been darkened as powers. The blank areas would show the kinds of abilities which may need further development. Such abilities may be assumed to be latent, and if not neglected for too long, might have a chance for fuller development.

We must be sure to understand, however, that the fact that there may be some abilities generally in need for increased development within disadvantaged population does not mean that these areas are necessarily weaknesses. The assumption rather would be that these abilities are not deficits, but are functionally probably at a level slightly above average for age and grade. In some cases, however, particularly where there have been cultural advantages available to a child, we will certainly find abilities which are more in balance and which may come close to patterning the abilities of the child from the advantaged cultures who is identified as gifted.

An example of an obviously superior 5 year old Negro boy is given in Shepard's recent article in Saturday Review (1969).

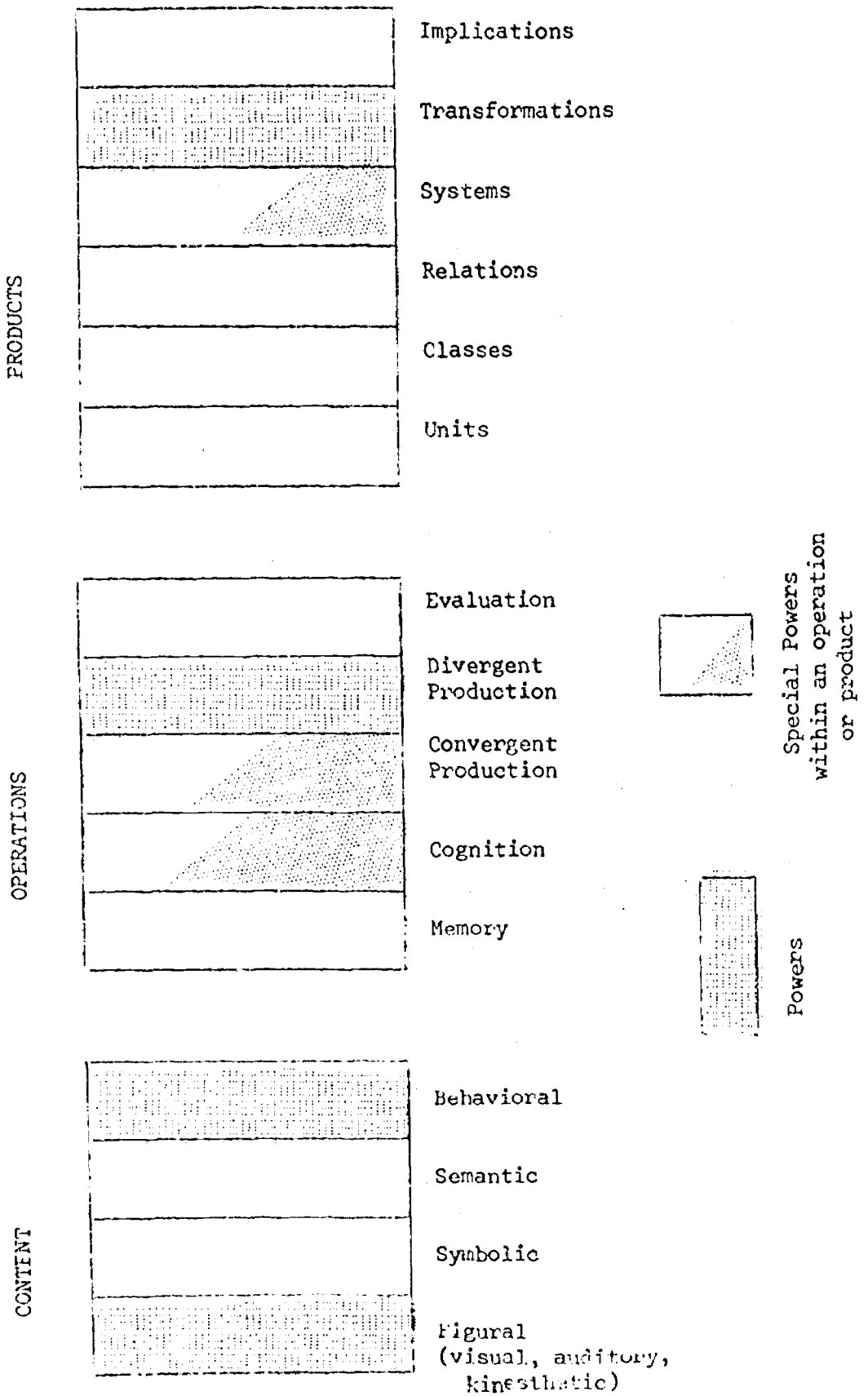


FIGURE 1: Profile of Powers of the Disadvantaged Gifted

This child who is already reading, is at this early age involved in the conflict of his blackness or his whiteness reflected in the reading matter. Shepard asks these questions: "Will my son see the necessity of asserting his blackness, his maleness, militantly and insensitively, riding roughshod over all who might in any manner oppose? Or, can the world of education, with all its demonstrated expertise utilize the precociousness of my little black boy for the building of a better world for all people", (p. 61).

A Proportion of Time in School

Culturally disadvantaged children and youth may have many reasons why they have not been able to attend school as early or as consistently as their advantaged peers. Sickness, caring for younger brothers and sisters, late entrance to school, no nursery school or kindergarten training, truancy related to the irrelevance of the curriculum, and other factors may have diminished the actual exposure of these children to the educational process. Some assessments of the value which the child has received from his educational experiences, that is, the relative amount of growth he has shown within shorter-than-normal periods of attendance should be considered. Some ratio of days attended to days enrolled might help here, as would some evaluation of the school experiences and the quality of education itself.

Factors Enhancing or Inhibiting Further Development of Abilities

Identification of the disadvantaged gifted would include personal, cultural, and family information which might affect the student's further development of his gifts. Particularly personality factors might add to the positive qualities of identification. Persistence, for example, would be such a factor, as would the cooperativeness of family members, and the facilitative attitudes of school personnel.

Measurement of Abilities in Disadvantaged Gifted

Specific tasks and specific tests will not be suggested in this article. Within the framework suggested in Figure 1, however, these suggestions are made:

1. The primary identification criterion should be that a child exhibit outstanding powers in one or more abilities valued by his culture; the degree to which he manifests these abilities should be related both to national and to local cultural norms.

2. The secondary criterion would be that applicable to the usual identification tests: he should measure on national norms on both ability and achievement approximately at "bright average" levels or better.

3. A special consideration should be given to those children with demonstrated creativity.

4. Children who show social leadership potentials should also be given special considerations as having a quality strengthening their identification as gifted.

Of course, as in other case study procedures, the qualitative aspects mentioned about time in school and positive enhancing factors within the personal and social realm are to be considered. Observations of classroom and out-of-school behaviors would be especially important.

One consideration as a new way of measuring disadvantaged gifted children would be the setting up of situational tests or tasks which are appropriate to test their special areas of abilities. Such measurement, by presentation of actual tasks to be accomplished, would be especially suitable for disadvantaged youth.

Summary

Various abilities which are rewarded and encouraged by disadvantaged cultures were discussed. These talents were than categorized according to Guildord's Structure of Intellect as "Powers of the Disadvantaged Gifted." Identification criteria were suggested as first those powers from the culture, and then secondly, those powers from the dominant culture, with special consideration for creativity and social abilities. Gowan (1968) presents in the following statement a rationale for our concern: "While all disadvantaged children need help, gifted disadvantaged children have more talent to reward society if it nurtures them, and more to oppose society if it neglects them."

[1] From an article in Schreiber's Guidance and the School Dropout.

References

American Youth. "1968 International Science Fair, The Grand Finale to a brilliant beginning for medical science quiz--Bracie Watson." September-October, 1968 Premises (Published by Ceco Publishing Co., General Motors).

Amos, William E. and Grambs, Gene Dresden, (eds.) Counseling the Disadvantaged Youth. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1968.

Bond, H.M. "The Productivity of National Merit Scholars by Occupational Class." School and Society, 85, 267-268, 1957.

Bruch, Catherine B. "Some Left-Handed Perceptions about the Gifted." Gifted Child Quarterly, (in press).

Coffin, Patricia. "Black Artist in a White Art World." Look, January 7, 1969, 66-69.

Gleason, Clyde W. "Employment Opportunities for Disadvantaged Youth." Counseling the Disadvantaged Youth, Amos, W.E., and Grambs, G.D. (eds.). Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1968, 206-235.

Gordon, E., "Counseling and Guidance for Disadvantaged Youth", in Guidance and the School Drop-out, ed., D. Schreiber, Washington, D.C.: National Education Association, 1964, 173-208.

Gordon, Jesse E. "Counseling the Disadvantaged Boy." In Counseling the Disadvantaged Youth, Amos, W.E., and Grambs, G.D., (eds.). Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1968, 101-118.

Gowan, John C. The Education and Guidance of the Ablest. Springfield, Ill.: Charles C. Thomas, 1974.

Gowan, John C. The Dropout and the Disadvantaged. Springfield, Ill.: Charles C. Thomas, 1965.

Gowan, John C. "Issues in the Education of Disadvantaged Gifted Students." Gifted Child Quarterly, 12(2), 1968, 115-119.

Grier, William H. and Cobbs, Price M. Black Rage. New York: Basic Books, Inc., 1968.

Guilford, J.P. The Nature of Human Intelligence. New York: McGraw Hill, 1967.

Meeker, Mary. The Structure of Intellect: Its Use and Interpretations. Columbus, Ohio: Charles Merrill and Co. (in press).

Newsweek, "Right Thinking People." 94, November 11, 1968.

Plowman, Paul D. "What Can Be Done for Rural Gifted Children and Youth?" Gifted Child Quarterly, 12(3), 1968, 160-180.

Shepard, Cynthia Ann. "The World Through Mark's Eyes." Saturday Review, 61, January 18, 1969.

Torrance, E. Paul. "Creativity in its Educational Implications for the Gifted." Gifted Child Quarterly, 12(3), 1968, 67-68.

Torrance, E. Paul "Finding Hidden Talents Among Disadvantaged Children." Gifted Child Quarterly, 12(3), 1968, 131-137.

Torrance, E. Paul. "Issues in the Identification and Encouragement of Gifted Disadvantaged Children", The Association for the Gifted Newsletter (in press).

Witt, George. The Life Enrichment Activity Program: A Brief History. New Haven, Conn., LEAP, Inc., 363 Dixwell Ave., 1968. (mimeo)

V. IDENTIFICATION PROCEDURES IN SPECIAL AREAS:

A. TALENT IN PERFORMING ARTS

B. CREATIVE THINKING ABILITIES

C. INDEPENDENT STUDY

IDENTIFICATION OF TALENT
IN
DANCE, MUSIC, THEATER, and VISUAL ARTS

The Educational Center for the Arts in New Haven employs a comprehensive identification process. The first step is to make students aware of the program by direct contact with counselors, teachers, or fellow students. More often than not, students talented in the performing arts or visual arts will be made aware of the program as they pursue their interest in their individual schools.

They then make application by filling out a single application sheet available through their guidance counselor. An appointment is then made so the student can visit E.C.A., have an interview, and have an opportunity to demonstrate his talent.

The interview is conducted by the Center's Planning and Placement Team. This team includes experts in the area of student interest. There are five facets to this evaluation: knowledge, skills, imaginative insight, commitment, and special needs not met by the high school. Each one is to be evaluated on a sliding scale in the face of specific evidence. The student will be asked to share work already completed (a portfolio) and demonstrate ability to be creative by performing a short exercise in the area of interest and talent.

With many school systems, actual participation at E.C.A. depends on the individual school's planning and placement team. In the city schools, the students are selected only by the E.C.A. evaluation.

The forms on the following pages are used in the screening and identification process at the Educational Center for the Arts. The final form represents one part of the total identification procedure in the "Norwalk Creative Child Program."

EDUCATIONAL CENTER FOR THE ARTS

55 audubon street new haven, connecticut 06511 777-8900

Dance_____ Music_____ Theatre_____ Visual Arts_____
(Check One Area)

Name_____

Female_____ Male_____ Date_____

Freshman_____ Junior_____

Sophomore_____ Senior_____

Parent's Name_____

Street Address_____

City_____ Zip Code_____

Home Telephone_____

School_____ Counselor_____

Describe what you do in the arts. Include ideas, experiences and ways you express and develop your talents.

Return this form to the Guidance Office at your high school.

Evaluation of Applicant by the Center's Planning and Placement Team

Name of Student	Name of High School	Area Reviewed

The Center's Planning and Placement Team has reviewed this individual's work and available support information. The results of this professional subjective evaluation are:

1. An evaluation of the student's overall evidence of talent and experience observed in the review session is

/ / /

undeveloped (little experience and formal training) — highly developed (much experience and formal training)

2. Check A or B

_____A. The individual qualifies to attend the Center because his/her overall qualifications are

_____outstanding

_____significant

_____acceptable

_____B. The individual does not qualify to attend the Center at this time because the evidence of outstanding talent is:

_____marginal

_____inadequate

Name of person(s) completing evaluation: Date:

Please rate applicant's aptitude and continued growth based on observation of specific evidence in dance, music, theatre or visual arts for the following:

1. Knowledge

/_____/_____/_____/_____/_____/

outstanding significant acceptable marginal inadequate

2. Skills, techniques, proficiency

/_____/_____/_____/_____/_____/

outstanding significant acceptable marginal inadequate

3. Imaginative insight, awareness, perception

/_____/_____/_____/_____/_____/

outstanding significant acceptable marginal inadequate

4. Commitment, intense interest, involvement

/_____/_____/_____/_____/_____/

outstanding significant acceptable marginal inadequate

5. Special needs not met in regular high school

/_____/_____/_____/_____/_____/

outstanding significant acceptable marginal inadequate

SKILLS QUESTIONNAIRE
(To be filled out by
applying students)

We would like to know some of the things you already have done. Below is a list to give you some reminders. Please add anything else you can think of. Say whether you have done it a little or a lot.

Do you:

Draw:

pencil

india ink

felt tip pens

charcoal

other?

What sorts of drawing do you do?

designs

people

or what?

people

fantasy landscapes

Make prints?

silk-screen

etching

linoleum

monoprints

Paint?

watercolor

oil

poster paint

acrylic

Media

take pictures

develop film

print photographs

other?

make films

movies

animated cartoons

use video tape

make recordings

Sculpture

clay	plaster
wood	wire
metal	plastic
other	

Can you

- weld
- solder
- use power tools

Do you

invent things	do carpentry
make posters	use hand tools
illustrate books	repair things
design record jackets	cook
do lettering	plant gardens
do mechanical drawing	decorate rooms
sew	make furniture
knit	crochet
embroider	do macrame
design stage sets	fix cars
make costumes (or design them)	make model car landscapes
build houses	build boats

Very quickly, please do ten sketches or more of different views, real or imaginary, of either two bricks or two shoes (for example: from the front, touching each other, separately, etc...)

We are interested in your ideas here, not your ability to do a "good" drawing. This shouldn't take you more than 10 or 15 minutes.

NORWALK CREATIVE CHILD PROGRAM

CRITERIA FOR STUDENT SELECTION IN CREATIVE CHILD PROGRAM

Selection of students for placement in a class based upon developing creativity must already possess most of the important characteristics of the creative individual. While rating sheets are subjective at best, they are the only existing method of comparison available to us at the moment. After reaching some agreement as to the meaning of the terms and characteristics listed below, we shall use a sliding rating scale from 9 - 10, 5 being the average. For example:

ORIGINALITY

Uses stereotypes, copies ideas — Seldom deviates from expected, copies occasionally — Most always has unusual presentation, never copies ideas

0 — 5 — 10

FLUENCY

Follows one teacher motivated idea — Has several ideas each lesson — Has many ideas in most areas

0 — 5 — 10

FLEXIBILITY

Never varies from first idea — Changes ideas occasionally — Often changes to new&better ideas

0 — 5 — 10

COMPLEXITY

Always selects simplest idea — Occasionally selects complex idea — Tends to select difficult,complex ideas

0 — 5 — 10

VISUAL DRAWING ABILITY

Does not draw well, lacks proportion in figures, etc. — Draws well. Lacks complete detail and composition — Draws extremely well with good detail

0 — 5 — 10

PERSERVERANCE

Seldom or never completes tasks — Usually completes tasks — Always completes tasks

0 — 5 — 10

IDENTIFICATION OF CREATIVE THINKING ABILITIES

In recent years creativity has been of major concern to educators and psychologists. This interest has grown out of the general concern for individual differences as well as that of the expanding concept of giftedness. The work of Getzels and Jackson, among others, helped focus attention on the creatively gifted. Their study indicated that creativity is a relatively distinct and separate ability, having a rather low correlation with IQ scores. It was observed, for example, that of the top fifth in creativity, only thirty percent were in the top fifth in intellectual giftedness.

There are various theories as to why people are creative. One theory is that creative persons have abilities in the "divergent production slab" of the Guilford Structure-of-Intellect model. Another view, supported by Maslow and Rogers, holds that creativity is a natural outcome of good mental health, or of self-actualization.

A number of centers of interest and research related to creativity have become active throughout the nation. Prominent among the proponents of creativity in the classroom are Parnes, Torrance, Williams, Taylor, and Renzulli. Each has a somewhat different approach and point of view, and this has created some differences as to the exact nature of creativity and what should be done to foster it. However, some general areas of agreement are becoming evident:

1. Definition

Creativity involves the ability to produce new forms -- to conjoin elements that are customarily thought of as independent or dissimilar.

Some components which make up creativity are:

a. Sensitivity to problems
b. Fluency of ideas and associations
c. Flexibility
d. Originality
e. Redefinition or the ability to rearrange
f. Analysis or the ability to abstract
g. Elaboration
h. Synthesis and closure
i. Coherence of organization
j. Evaluation

Some of the difficulty in defining creativity arose from a failure to differentiate between the various levels of creativity which are given by Calvin Taylor as:

Expressive creativity	- independent expression in which skills, originality, and quality are unimportant
Productive creativity	- production of a product through mastery over some portion of the environment
Inventive creativity	- ingenuity in seeing new uses for old parts (no new basic idea involved)
Innovative creativity	- a significant alteration in the basic foundations or principles of a theory (needs highly developed abstract conceptualizing skills)
Emergentive creativity	- ability to absorb the experiences which are commonly provided and from this produce something new

The process by which the creative process evolves includes preparation, incubation, illumination and elaboration.

2. Characteristics of Creative Individuals

Some studies list as many as eighty-four characteristics which may be attributed to creative individuals. Those which occur most frequesntly in studies are:

Curious	Flexible	Persistent
Original	Open	Fluent
Independent	Sensitive	Elaborative
Imaginative	Intuitive	Sense of Humor
Nonconforming	Energetic	Playful
Perceptive	Questioning	

The study of creative adults has indicated undesirable personality factors which have probably grown out of the lifelong struggle to voice their creative efforts and seek acceptance for them. It is felt that creative children, if identified, nurtured, and valued, can be helped to adapt those aspects of their personalities which would clash with others.

3. Identification

At this time it is not clearly understood whether creativity is a unitary process or made up of a composite

of many processes. Objective measures for assessing some of the components of creativity are in the developmental stage -- some are being validated at the present time. Generally, these measures explore the individual's ability to think of:

a. Regular or alternate uses for objects
b. Consquences in connection with a new or unusual situation
c. Things that belong in certain classes
d. Sentences when given the beginning letters of words
e. Words of similar meaning to the given word
f. Figures or pictures which may be developed from a mark or line
g. Ways of elaborating upon details or pictures
h. New patterns by removing parts of a given pattern

Although there is no single, universally accepted way of identifying the creative child, there is enough experience with some of the tests of creative abilities to have some confidence in them for identifying those with higher creative potential.

The Torrance tests emphasize divergent production and transformation abilities. The tests used by Getzels and Jackson include four divergent-production abilities and three transformation abilities. Guilford also has tests which tap a number of divergent-production abilities. Starkweather's tests are particularly useful with very young children. A variety of other tests, including personality and biographical indicators, may be found in the annotated listing of instruments in a later section of this publication. In addition, teachers and others can identify children who show unmistakable signs of creative potential in behavior and/or in the products they produce. Just because a child is creative in one area, is not a reason to assume he is creative in others. Persons with special training in art, music, and theater are needed in the identification of these kinds of creative talents.

4. Implications for the School

It is thought that creativity cannot be developed in individuals unless they already possess those traits which constitute creativity. It is felt that the attitude should be more one of "making it possible for creativity to emerge." Many researchers feel the environment should should be "responsive" rather than just "permissive." E. Paul Torrance and others who have succeeded in helping children to be more creative in their thinking and writing have suggested the following as factors in a responsive environment:

a. Include a variety of learning tasks in the day's activities as some children prefer to learn by

discovery rather than by authority
b. Bring more stimuli into the learning experiences
c. Ask questions which elicit unique or original responses

References

Barron, F., "Creativity: What Research Says About It." NEA Journal, 50 (March, 1961). pp. 17-19.

Gifted Child Quarterly, "Career Patterns and Creative Achievements of Creative High School Students Twelve Years Later." Summer 1972, pp. 75-88.

Gifted Child Quarterly, "The Creative Person and Non-Ordinary Reality." Fall 1972, pp. 203-227.

Gowan, J., Demos, G., and Torrance, E.P., Creativity: Its Educational Implications. John Wiley and Sons, Inc.: New York, 1967.

Gowan, J. and Torrance, E.P. Educating the Ablest. F.E.Peacock, Inc.: Itasca, Ill., 1971.

Gruber, H.E. (Ed.), Contemporary Approaches to Creative Thinking. A symposium held at the University of Colorado, New York: Atherton Press 1963. 223 pp.

Guilford, J.P., "Factors That Aid and Hinder Creativity." Teachers College Record 63: 80-92, (February, 1962).

MacKinnon, D.W., "Characteristics of the Creative Person: Implications for the Teaching - Learning Process." Current Issues in Higher Education. Washington, D.C.: Association for Higher Education, NEA, 1961. pp. 89-92.

Taylor, C.W., "The Creative Individual: A New Portrait in Giftedness." Educational Leadership (October, 1960). pp. 7-11.

Torrance, E.P., Guiding Creative Talent. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1962. 278 pp.

Torrance, E.P., Rewarding Creative Behavior. Englewood Cliffs, N.J.: Prentice-Hall, 1965.

Identification Process: Independent Study Program for the Talented and Gifted and Potentially Talented and Gifted

HAMDEN - NEW HAVEN COOPERATIVE EDUCATION CENTER

The identification process is based upon characteristics assessed through an interview by the program coordinator and faculty resource person.

Whereas some techniques of selection are primarily concerned with standardized test scores, such scores are the last reference to be considered when selecting students for the Independent Study Program. The staff feels that the individual interview can provide a sensitive and accurate assessment of the depth and diversity of the student's interests, his intellectual and creative potential, and the degree of motivation to work in the area of interest. Because of the nature of this independent style of learning, the personal interview is the crucial feature in the identification process. In addition, the judgment of guidance counselors and teachers weigh heavily in the evaluation of the student's potential.

It is felt that excessive dependence on traditional tests would result in missing a large body of students who have the capability of functioning at high levels in an independent study program. This does not mean that the staff cannot demonstrate or justify the talent and giftedness apparent in each of the students selected for the program. The interest and motivaion are usually backed up by grades, test results and intense involvement in the area of interest.

The staff of the Independent Study Program persists in the feeling that personal recommendations and interviews are the most useful tools of identification available. While recognizing the validity of I.Q. tests, individual Binet tests and Torrance creativity tests, the staff believes that these measures do not provide them with sufficient information dealing with students' abilities in independent study, their interests and involvements, specific skills, or potential for growth in the program.

The following materials, published by the Cooperative Education Center, provide an overview of the program and its selection procedures.

INDEPENDENT STUDY PROGRAM

HAMDEN-NEW HAVEN

COOPERATIVE EDUCATION CENTER

1450 Whitney Avenue - Hamden - Connecticut 06517

Telephone: 203-288-7926

HISTORY

The Independent Study Program for the Talented and Gifted and potentially Talented and Gifted is one of many innovative programs at the Hamden-New Haven Cooperative Education Center. The program originated in 1967. It was designed as an approach to high school education which used the student's interests as a springboard for exploration of a subject. After four years of refinement of this model of suburban-urban cooperation, the program was introduced into the four separate area high schools where it currently flourishes.

PROGRAM OBJECTIVES

- to focus interests, goals and premises
- to interpret critically and analytically
- to extrapolate and synthesize
- to foster creativity and originality
- to help the student to recognize that failures, frustrations, setbacks and successes are a part of the learning process
- to develop humility and openmindedness to learning by instilling in the students the understanding that one question leads to more
- to develop inventiveness in problem solving
- to develop resourcefulness
- to develop an ability of self evaluation
- to appreciate the emotional involvement in the learning process

SELECTION OF STUDENTS

Two interviews are required for the student interested in the Independent Study Program.

The interview with the coordinator is to determine:

- the depth and diversity of a student's interests, inside and outside of school, that are pursued for their own sake
- the interests that might be pursued in the program
- the ability of the student to assume responsibility for the pursuits of Independent Study Program projects, with the guidance and resource help of an advisor
- the intellectual or creative potential of the student

The interview with the subject area teacher-advisor is to determine:

- the suitability of the student's interests for an Independent Study Progam project in the subject area selected
- the possibility for a good working relationship between the student and teacher-advisor

Together, coordinator, teacher-advisor and student decide on the appropriateness of the program for the student.

METHOD OF INSTRUCTION

Independent Study as a style of learning takes many forms. The relationship between the student and his/her teacher-advisor varies with the needs and interests of the students. Student goals are assessed and a course of study is designed by the student and his/her teacher-advisor. Each student is expected to meet with his/her teacher advisor a minimum of once a week.

The student may need an expert in his field of study, a professional researcher or a facilitator to bring him in contact with an appropriate resource. The teacher-advisor role varies in these contexts. The student with whatever help available, studies a topic in depth (Sickle Cell Anemia), at his own pace (differential equations), from a particular point of view (human anatomy-physiology through the nervous system), or perhaps in an interdisciplinary way (United States history through a study of American novels). Contact with an experienced teacher,

a university research laboratory or a local historical society may meet a student's needs.

Regular evaluation is made by the student and teacher-advisor together to insure progress toward goals.

CREDIT / EVALUATIONS

Course credit is given for work completed in the Independent Study Program. Each student in the program is given a written evaluation along with a letter grade by his/her teacher-advisor.

In addition each student assesses his/her own progress in terms of his/her individual goals.

STAFFING

Subject-advisors in all major disciplines

FUNDING

The Independent Study Program for the Talented and Gifted is funded by the reimbursement method under P.A. 627 section 10-76 of the General Statutes, 1967.

Section 10-76 allows for reimbursement for programs when provided as part of the public school program and approved by the Secretary of the Connecticut State Board of Education.

VI. ANNOTATED LISTING OF STANDARDIZED INSTRUMENTS AVAILABLE FOR IDENTIFYING THE GIFTED AND TALENTED

ALPHA BIOGRAPHICAL INVENTORY. Three hundred multiple-choice items assess potential for scientific creativity in high school students. Available from The Institute for Behavioral Research in Creativity.

ANALYSIS OF LEARNING POTENTIAL, by Walter N. Durost, Eric F. Gardner, Richard Madden and George Prescott. An intelligence test which includes a battery of 5 group tests covering grades 1-12 for measuring general intelligence or scholastic aptitude.

BIOGRAPHICAL INVENTORY, by C.E. Shaefer. The one hundred twenty-five multiple-choice items assess biographical information and creativity-related activities in areas of family history, avocational activities, and miscellaneous. Available from Educational & Industrial Testing Service.

CALIFORNIA ACHIEVEMENT TESTS, by Ernest W. Tiegs and Willis W. Clark. Achievement tests providing 11 or 12 scores: reading, (vocabulary, comprehension, total) mathematics (computation, concepts, and problems, total) language (auding (level 1 only), mechanics, usage, and structure, total, spelling), total. McGraw-Hill

CALIFORNIA PSYCHOLOGICAL INVENTORY (CPI), by H.G. Gough. Measures folk-concepts of interpersonal behavior that are relative to social interaction, stressing the healthy rather than pathological aspects in behavior and personality. Provides measures of (1) poise, ascendency, and self-assurance, (2) socialization, maturity, and responsibility, (3) achievement, potential, and intellectual efforts, (4) intellectual and interest modes. Available from Consulting Psychologists Press, Inc.

CALIFORNIA TEST OF MENTAL MATURITY, by Elizabeth T. Sullivan, Willis W. Clark and Ernest W. Tiegs. Intelligence test providing 8 scores: logical reasoning, spatial relationships, numerical reasoning, verbal concepts, memory, language total, non-language total, total. (K-adult) approximately 90 minutes provides deviation I.Q.

CREATIVE PROBLEM-SOLVING IN ARCHITECTURE TEST BATTERY, by G.T. Moore & L.M. Jay. Assesses level of creative problem-solving in architecture and allied disciplines. Available from Architectural Experimental Laboratory, University of California.

CREATIVITY TEST (FORM H), by C.H. Lawshe & D.H. Harris. Twenty item test to determine fluency, flexibility, and originality. Available from Purdue University.

DECORATIONS (DEC), by S. Gardner, A. Gershon, P.R. Merrifield & J.P. Guilford. A measure of the ability for divergent production of figural implications, an ability parallel to one previously called "elaboration" which is the ability to add meaningful details to what is given. Given outlines of well-known articles of furnishings, the examinee is to add decorative lines. Artistic quality is not important; figural ideas are. High school through college and adult levels. Available from Sheridan Psychological Services, Inc.

DIFFERENTIAL APTITUDE TESTS, by G.K. Bennett, H.G. Seashore, A.G. Wesman. An integrated battery of aptitude tests for junior and senior high schools. Provides a profile of the relative strength and weaknesses of each student in these 8 abilities; Verbal reasoning, Numerical ability, Abstract reasoning, Space relations, Mechanical reasoning, Clerical speed and accuracy, Language usage: Spelling, Grammar. Available from The Psychological Corporation.

EXPRESSIONAL FLUENCY (EF), by P.R. Christensen & J.P. Guilford. A measure of the factor of divergent production of semantic systems defined as the ability to produce efficiently appropriate verbal expressions of organized thought. Jr. high school through college and adult levels. Available from Sheridan Psychological Services, Inc.

FLANAGAN APTITUDE CLASSIFICATION TEST NO. 18--INGENUITY, by J.C. Flanagan. Measures creativity or inventiveness. Each test item contains a description of a problem situation similar to one that might be encountered in life. Aspects of the solution are given, but the key word or words which include the crucial ideas are left blank, requiring the individual to think of an ingenious solution. The five choices are given in terms of the first and last letters of the possible right answer, so the individual really develops the solution. Designed primarily for high school students. Available from Science Research Associates.

GUILFORD - ZIMMERMAN INTEREST INVENTORY (GZII), by J.S. Guilford & W.S. Zimmerman. An interest inventory based upon factor analytic findings providing ten extremely homogeneous scales which comprehensively cover broad areas of interest: mechanical (manipulative, constructive), natural (outdoor), aesthetic (appreciation), service (social welfare: helping others), clerical (business detail), mercantile (business; merchandising), leadership (administrative; persuasive), literary (verbal), scientific (investigating; experimental), and creative (covering all areas where uniqueness or inventiveness plays a role). High school, college and adult levels. Available from Sheridan Psychological Services, Inc.

HENMON-NELSON TESTS OF MENTAL ABILITY, by Tom A. Lamke & M.J. Nelson. If a single predictor of school success is needed which can be given in less than a class period and scored with a minimum of time and effort, this might be the test to use. Includes 90 items with heavy emphasis on verbal content. Items are arranged in omnibus cycle form--different types recur regularly and in each new cycle with increasing difficulty. Available through Houghton Mifflin.

IDEATIONAL FLUENCY I (IF), by P.R. Christensen & J.P. Guilford. A measure of the factor of divergent production of semantic units requiring the examinee to produce efficiently many ideas fulfilling meaningful specifications. Jr. high school through college and adult levels. Available from Sheridan Psychological Services, Inc.

IOWA TESTS OF BASIC SKILLS, under the direction of E.F. Lindquist and A.N. Hieronymns. Tests devised to test functional skills of children in grades 9-12 in the areas of vocabulary, reading conprehensions, language skills, work study skills and arithmetic. Grade norms and percentile norms within grade are provided. 279 minutes in 4 sessions. Houghton Mifflin Co.

KUHLMANN - ANDERSON MEASURE OF ACADEMIC POTENTIAL, by F. Kuhlmann, R.G. Anderson. Measure of general learning ability or academic potential. (K-12) Deviation I.Q. percentiles, stanines. 50-60 minutes.

LORGE-THORNDIKE INTELLIGENCE TESTS, by Irving Lorge, Robert L. Thorndike and Elizabeth Hagen. Provides 3 scores: verbal, nonverbal, composite. Easily administered and scored. Time: 90 minutes. Multi-level edition, grades 3-13. Available through Houghton Mifflin Co.

MAKING OBJECTS (MO), by S. Gardner, A. Gershon, P.R. Merrifield & J.P. Guilford. A measure of the factor of divergent production of figural systems, this test is parallel to those measuring expressional fluency in the verbal or semantic category. The factor might be called "figural expressional fluency," or more precisely, "visual-figural expressional fluency." Given a collection of very simple figural elements, the examinee is told to construct specified objects by combining those elements. Jr. high school through college and adult levels. Available from Sheridan Psychological Services, Inc.

METROPOLITAN ACHIEVEMENT TESTS. Long test (up to 4 hrs.). Tests include: word knowledge, reading, spelling, language, language skills, arithmetic computations and concepts, social studies and science.

MILLER ANALOGIES TEST, by W.S. Miller. Single-score test of high difficulty level, originally designed to measure scholastic aptitudes at graduate school level. Also useful in the selection of individuals for high level positions in business. Available from The Psychological Corporation.

MYERS-BRIGGS TYPE INDICATOR (MBTI), by Isabel Myers-Briggs. A test of cognitive styles and personalities. Types based largely on Carl G. Jung's theory of psychological attitudes, functions, and types. Provides measures of two basic attitudes--introversion and extroversion; with a preference for perceiving and judging; of the relative strength of two opposed perceiving functions--sensation and intuition and of two opposing judging functions--thinking and feeling. Also identified as a subject's personality type in the Jung frame of reference. Available from Educational Testing Service.

NEW USES (NU), by R. Hoepfner & J.P. Guilford. A measure of the structure-of-intellect ability of convergent production of semantic transformations; a redefinition ability. A low score on this test probably indicates "functional fixedness," which serves as an inhibitor in problem-solving, preventing insights. High school, college, and adult levels. Available from Sheridan Psychological Services, Inc.

OMNIBUS PERSONALITY INVENTORY (FORM F). Requires response to three hundred and eighty-five true-false items. Provides scores on fourteen scales. The following scales appear to be most useful in studying the creative person: Thinking Introversion, Theoretical Orientation, Estheticism, Complexity, and Autonomy. Available from The Psychological Corporation.

OPINION, ATTITUDE, AND INTEREST SURVEY (OAIS). Questionnaire keyed for several traits, including creative ability and potential (Creative Personality (CP) Scale). Available from OAIS Testing Program.

OTIS-LENNON MENTAL ABILITY TEST, by Arthur T. Otis & Roger T. Lennon. Measure of general ability or scholastic aptitude. Brief test 30-45 minutes for all ages K-12. Provides IQ's percentile ranks and stanines by age and grade. Available through Western Psychological Services.

16 PERSONALITY FACTORS TEST. High score shows the type of personality which is creative and inventive in any area in which he possesses the ability and training; that is, the general tendency to work creatively in science, literature, art, or the every-day job, etc., regardless of field. Available from The Institute of Personality and Ability Testing.

PERTINENT QUESTIONS (PQ), by R.M. Berger & J.P. Guilford. A measure of the factor of conceptual foresight, or cognition of semantic implications: the ability to see implications of a meaningful kind, as in having anticipations, in being aware of consequences, and in making predictions. High school, college, and adult levels. Available from Sheridan Psychological Services, Inc.

PLOT TITLES (PT), by R.M. Berger & J.P. Guilford. A measure of two factors: ideational fluency (divergent production of semantic units) and originality (divergent production of semantic transformations). The former was defined under Ideational Fluency. The latter is seen in the efficient production of ideas of high quality with respect to the criterion of "cleverness." High school, college and adult levels. Available from Sheridan Psychological Services, Inc.

POSSIBLE JOBS (PJ), by A. Gershon & J.P. Guilford. A measure of the factor of divergent production of semantic implications, the ability to elaborate upon given information or to suggest alternative deductions or extensions. Jr. high school through college and adult levels. Available from Sheridan Psychological Services, Inc.

PROJECT TALENT CREATIVITY TEST. Measures creativity or inventiveness. Each test item contains a description of a problem situation similar to one that might be encountered in life. Aspects of the solution are given, but the key word or words which include the crucial ideas are left blank requiring the individual to think of an ingenious solution. The five choices are given in terms of the first and last letter of the possible right answer, so the individual really develops the solution. Designed primarily for high school students. University of Pittsburgh, 1960.

REMOTE ASSOCIATES TEST, by S.A. Mednick & M.T. Mednick. Measures ability to think creatively based on "associative" interpretation of the creative thinking process--an interpretation which envisions the process as one of seeing relationships between seemingly "mutually remote" ideas and approach to various problems and allows demonstration of creative problem solutions. Available from H.J.P. Schubert.

RUNNER STUDIES OF ATTITUDE PATTERNS (INTERVIEW FORM III). Quite consistently, the Freedom Orientation Scales have correlated positively and the Control Orientation Scales have correlated negatively with measures of creative behavior. Available from Runner Associates.

SEEING PROBLEMS (SP), by P.R. Merrifield & J.P. Guilford. A measure of the factor cognition of semantic implications. Jr. high school through college and adult levels. Available from Sheridan Psychological Services, Inc.

SEQUENTIAL TESTS OF EDUCATIONAL PROGRESS, by Cooperative Test Division Educational Testing Service. STEP are designed to measure the outcomes of educational experiences, both formal and informal, from elementary school to college. Tests for communication (separate tests for reading, writing, essay writing, & listening) science, mathematics and social studies. Authors emphasize utilization of learned skills in solving new problems.

SIMILE INTERPRETATIONS (SIM), by P.R. Christensen, J.P. Guilford & R. Hoepfner. A measure of the factor of divergent production of semantic systems which was defined under Expressional Fluency. High school, college and adult levels. Available from Sheridan Psychological Services, Inc.

SKETCHES (SKET), by A. Gershon, S. Gardner & J.P. Guilford. A measure of the ability known as figural fluency, or divergent production of figural units: the ability to product efficiently a variety of units or visual-figural information in response to specifications. Four basic, simple figures are given, each repeated twelve times, the examinee's task being to make each one into a recognizable object. Jr. high school through college and adult levels. Available from Sheridan Psychological Services, Inc.

SLOSSON INTELLIGENCE TEST, by Richard L. Slosson. A brief (10-20 min.) individual test of intelligence designed to be used by relatively untrained examiners as well as qualified professionals in working with both children and adults. The SIT is designed to provide screening information and when used for this purpose can be a useful tool in selecting individuals for more comprehensive evaluation of mental ability. Available from Slosson Educational Publications.

SOUNDS AND IMAGES, by B.F. Cunnington & E. Paul Torrance. Familiar and obscure sounds on 33 1/3 rpm record elicit associations which may be scored for originality. Available from Personnel Press, Inc.

STANFORD ACHIEVEMENT TEST, by Truman L. Kelley, Richard Madden, Eric F. Gardner, Herbert C. Rudman. There are batteries at five levels K-12. Includes subtests such as Language, Arithmetic, Social Studies, Reading and Spelling. Long (90 min. to 5 hrs.) depending on which level.

STANFORD-BINET INTELLIGENCE SCALE (1938 MM yearbook) Ages 5 and over: an item classification system for use by school psychologists in analyzing and reporting performance in 6 categories: general comprehension, visual motor ability, arithmetic reasoning, memory and concentration, vocabulary and verbal fluency, judgement and reasoning.

STARKWEATHER FORM BOARDS TEST. Consists of four form boards picturing scenes familiar to most children of pre-school age. The scoring of this test indicates the relationship between the child's conforming and non-conforming responses. Requires special apparatus. Available from Elizabeth Starkweather.

STARKWEATHER ORIGINALITY TEST. Predicts originality independently of verbal ability. Requires special apparatus. Available from Elizabeth Starkweather.

STARKWEATHER SOCIAL CONFORMITY TEST. In this test, the tendency to conform or not is influenced by the child's actual color preferences. Requires special apparatus. Available from Elizabeth Starkweather.

STARKWEATHER TARGET GAME. Designed to measure young children's willingness to try difficult tasks. Special apparatus required. Available from Elizabeth Starkweather.

TESTS OF CONCEPT UTILIZATION, by Richard L. Craget, Ph.D. New clinical instrument used to assess 5 areas of conceptual thinking: Color; Shape; Relational function; Homogeneous functions; and Abstract function. Administered in 10 minutes. Correlations are provided between various conceptual abilities and grade point averages (grade 1-12).

TORRANCE TESTS OF CREATIVE THINKING, by E. Paul Torrance, Ph.D. Assesses 4 mental characteristics important to creative thinking ability: Fluency, Flexibility, Originality, and Elaboration. Presented in 2 test booklets. 1. Figural which requires drawing responses, group test (k-adult) 45 minutes. 2. Verbal requires written responses. 60 minutes.

TORRANCE TESTS OF THINKING CREATIVELY WITH PICTURES (FORMS A & B), by E. Paul Torrance. Contain three subtests which require individual to draw pictures which elaborate upon (a) a single brightly colored form, (b) ten incomplete line drawings, and (c) thirty-six identical circles (or pairs of parallel lines). Available from Personnel Press, Inc.

TORRANCE TESTS OF THINKING CREATIVELY WITH WORDS (FORMS A & B), by E. Paul Torrance. Contain seven subtests which require individual to (a) ask questions about an unusual picture, (b) guess causes of the action in the picture, (c) guess consequences of the action in the picture, (d) think of ideas for improving a stuffed toy monkey or elephant, (e) list unusual uses for cardboard boxes or tin cans, and (f) predict consequences of an improbable event. Available from Personnel Press, Inc.

UTILITY TEST (UT), by R.C. Wilson, P.R. Merrifield & J.P. Guilford. A measure of both ideational fluency (divergent production of semantic units) and spontaneous flexibility (divergent production of semantic classes), which requires the examinee to conceive of new and unusual uses for familiar objects based on as wide a variety of attributes of the objects as possible. High school, college and adult levels. Available from Sheridan Psychological Services, Inc.

WECHSLER INTELLIGENCE SCALE FOR CHILDREN, by David Wechsler. 13-15 scores: Verbal (information, comprehension, arithmetic, similarities, vocabulary, digit span (optional), total) performance, (picture completion, picture arrangement, block design, object assembly, mazes (optional), coding, total). The WISC is currently the best available compendium of individually administered subject comparison techniques purporting to measure intelligence. Ages 5-15.

WELSH FIGURE PREFERENCE TEST, including the Barron-Welsh Art Scale. Requires reaction to four hundred figures varying on several dimensions. In addition to the original scales, factor analytic studies recently completed may increase the usefulness of this instrument. Available from Consulting Psychologists Press.

WORD FLUENCY (WF), by P.R. Christensen & J.P. Guilford. A measure of divergent production of symbolic units requiring the examinee to produce rapidly words fulfilling specified symbolic (letter) properties. Jr. high school through college and adult levels. Available from Sheridan Psychological Services, Inc.

VII. BIBLIOGRAPHY ON IDENTIFICATION

BIBLIOGRAPHY
Identification of Gifted and Talented

Barron, F. "The Measurement of Creativity." In Whitla, D. K., (ed.) Handbook of Measurement and Assessment in Behavioral Sciences. Menlo Park: Addison Wesley, 1968.

Beeman, G. "A Comparative Study of the WISC and Stanford-Binet with a Group of More Able and Gifted 7-11 Year old Children." Presentation to California Association of School Psychologists, 1960. (mimeographed)

Bloom, B. S. (Ed.) Stability and Change in Human Characteristics New York: John Wiley & Sons, Inc., 1964.

Blumenfeld, W. S. Research Report on Selecting Talented Negro Students: Nominations vs. Test Performance. Evanston: National Merit Scholarship Corporation, 1969.

Bruch, C. R. Modification of Procedures for Identification of the Disadvantaged Gifted. Gifted Child Quarterly, 1971, 15, 267-272.

Bruch, C. B. Pro-Cultural Measurement: The Use of the Abbreviated Binet for the Disadvantaged. Athens: University of Georgia, March, 1973. (mineographed).

Buros, O. K. (Ed.) The Seventh Mental Measurements Yearbook. Highland Park, N. J.: The Gryphon Press, 1972.

Crockenberg, S. B. "Creativity Tests: A Boon or Boondoggle for Education." Review of Educational Research, 1972, 42.

Douglass, J. H. Strategies for Maximizing the Development of Talent Among the Urban Disadvantaged. Paper presented at the annual meeting of The Council for Exceptional Children, Denver, Colorado, April, 1969.

Gallagher, J. J. Research Summary on Gifted Child Education. Springfield, Ill.: State Department of Public Instruction, 1966.

Getzels, J. W., & Jackson, P. W., "The Meaning of 'Giftedness'- An Examination of an Expanding Concept." Phi Delta Kappan, 1958, 40, 75-77.

Gillooly, W. B., & Thomas, C. L. The Effects of Familiarization on the Verbal Intelligence Test Performance of Socially Disadvantaged Youth. New Brunswick, N. J.: Rutgers State University, 1970.

Goslin, D. A. The Search for Ability. New York: Russell Sage Foundation, 1963.

Guilford, J. P. The Nature of Human Intelligence. New York: McGraw-Hill, 1967.

Hartman, R. K. Teacher Identification of Student Leaders. Unpublished paper, University of Connecticut, 1969. (Mimeo.)

Institute for Behavioral Research in Creativity. Alpha Biographical Inventory, Greensboro, N. C.: Prediction Press, 1968.

Jacobs, Jon C. "Effectiveness of Teacher and Parent Identification of Gifted Children as a Function of School Level: Psychology in the Schools; 1971, 8, p140-2.

Jarecky, R. K. "Identification of the Socially Gifted." Exceptional children, 1959, 25, 415-419.

Jenkins, M. D. "The Upper Limit of Ability Among American Negroes." In J. L. French (Ed.), Educating the Gifted: A Book of Reading. New York: Holt, Rinehart & Winston, 1964.

Kough, J. and DeHaan, R. Teacher's Guidance Handbook. Chicago: Science Research Associates, 1955.

Lanza, Leonard G. and Vassar, William G. "Designing and Implementing a Program for the Gifted and Talented," The National Elementary Principal VLI, N5, 1972.

Lucito, L. Creativity Traits. Atlanta: Unpublished manuscript, Georgia State University, 1972.

Marland, S. P. Education of the Gifted and Talented. 2 vols. Washington D. C. U. S. Government Printing Office, 1971.

Mathis, H. I. "The Disadvantaged and the Aptitude Barrier." Personnel and Guidance Journal, 1969, 47, 467-472.

Martinson, R. A. "Children with Superior Cognitive Abilities." In L. M. Dunn, (Ed.) Exceptional Children in the Schools, 2nd Edition. New York: Holt, Rinehart & Winston, Inc, 1973.

Miller, L. M. (Ed.) Guidance for the Underachiever with Superior Ability. Washington, D. C. U. S. Department of Health, Education and Welfare, 1961.

Newland, T. E. "Psychological Assessment of Exceptional Children and Youth." In W. A. Cruickshank (Ed.), Psychology of Exceptional Children and Youth (3rd ed.) Englewood Cliffs, N. J.: Prentice-Hall, 1971.

Newland, T. E. The Blind Learning Aptitude Test. Final Report, February, 1969, Project No. 6-1928, U. S. Office of Education.

Niles, C. C. "Gifted children." In L. Carmichael (Ed.). Manual of Child Psychology. New York: John Wiley & Sons, 1955.

Orpet, R. E., & Meyers, C. E. "Six Structures of Intellect Hypotheses in Six-Year-Old Children." Journal of Educational Psychology, 1966, 57, 341-346.

Passow, A. H., Goldberg, M., & Tannenbaum, A. J. Education of the Disadvantaged. New York: Holt Rinehart, & Winston, 1967.

Plaut, R. Searching and Salvaging Talent Among Socially Disadvantaged Populations. New York: National Scholarship Service Fund for Negro Students, 1963.

Plaut, R. L. Blueprint for Talent Searching. New York: National Scholarship Fund for Negro Students, 1957.

Plowman, P. Rice, J., Sato, I., and others. Education of Mentally Gifted Minors. Sacramento: California State Department of Education, 1971.

Pressey, S. L. Educational Acceleration: Appraisals and Basic Problems. Columbus, Ohio: Ohio State University Press, 1949.

Psychological Corporation "Test Service Bulletin." The Identification of the Gifted. New York: Psychological Corporation, 1972.

Renzulli, J. S. "Talent Potential in Minority Group Students." Exceptional Children, November, 1971.

Renzulli, J. S., Hartman, R. K., and Callahan, C. M. "Teacher Identification of Superior Students." Exceptional Children, November, 1971.

Sheldon, W. D., and Manolakes, G. "Comparison of the Stanford-Binet Revised Form L, and the California Test of Mental Maturity (S-Form)." Journal of Education Psychology, 45, 1954.

Stallings, C. Gifted Disadvantaged Children. Technical paper, National Leadership Institute, Teacher Education/Early Childhood. Storrs: University of Connecticut, March, 1972.

Taylor, C. W. "Be Talent Developers. . . as well as knowledge dispensers." Today's Education, 1968, 57, 67-69.

Terman, S. M. Genetic Studies of Genius. Stanford: Stanford University Press, 1925-1959. 5 Vols.

Torrance, E. Paul; Khatena, Joe "What Kind of Person are You? A Brief Screening Device for Identifying Creatively Gifted Adolescents and Adults." Gifted Child Quarterly, 1970, 14, 71-5.

Torrance, E. P. Torrance Test of Creative Thinking: Norms-technical manual. Princeton, N. J.: Personnel Press, 1966.

Torrance, E. P. Understanding the Fourth Grade Slump in Creativity. Athens: Georgia Studies of Creative Behavior, 1967.

Torrance, E. P. "Finding hidden talents among disadvantaged children." Gifted Child Quarterly, 1968, 12, 141-137.

Torrance, E. P. "Are the Torrance Tests of Creative Thinking biased against or in favor of 'disadvantaged' groups?" Gifted Child Quarterly, 1971, 15, 75-80.

Wallach, M. A. "Intelligence Tests, Academic Achievement, and Creativity." Impact of Science on Society, XXL, No. 4, 1971.

Walton, G. Identification of the Intellectually Gifted Children in the Public School Kindergarten. Los Angeles: Unpublished doctoral dissertation, University of California, 1961.

SELECTED ABSTRACTS DEALING WITH IDENTIFICATION OF GIFTED AND TALENTED

ABSTRACT 31496

EC 03 1496 ED N.A.
Publ. Date 70 6p.
Keogh, Barbara K., Smith, Carol E.
Early Identification of Educationally High Potential and High Risk Children.
EDRS not available
Journal of School Psychology: V8 N4 P285-90 Win 1970

Early identification of educationally high potential and high risk children was investigated by following 49 children from kindergarten entrance through grades 5 of a regular school program. Kindergarten predictive measures were the Bender Gestalt and teachers' evaluations. Follow-up measures were yearly standard achievement test results. Analyses revealed consistently high and significant relationships between teachers' ratings and subsequent school achievement. Teachers were surprisingly accurate in early identification of both high risk and high potential children. The Bender was more accurate for identification of high potential than high risk children. Findings support the use of these measures for initial screening of children entering formal school programs. Specification of dimensions of teachers' evaluations may provide clues to understanding the complexities of school readiness. (Author)

ABSTRACT 32639

EC 03 2639 ED N.A.
Publ. Date 69 14p.
Saunders, Robert J.
Identifying the Artistically Gifted in the Classroom.
Connecticut State Department of Education, Hartford, Bureau of Elementary and Secondary Education
EDRS not available
Connecticut State Department of Education, 165 Capitol Avenue, Hartford, Connecticut 06106.
Prepared for the Creativity: Its Educational Implications Workshop (North Haven, Connecticut, December 3, 1969).

To familiarize the general classroom and art teacher with essential art education literature dealing with the creative student in art, a brief review of research studies on this topic made in art education as a discipline (as opposed to theoretical and philosophical statements on the nature of the creative process) is presented. The meanings of the terms talented, gifted, and creative in art are discussed and criteria for creativity enumerated. Suggestions are made as to how artistically gifted students can be identified within the limitations of the average art lesson or art activity at the elementary and secondary levels. (KW)

ABSTRACT 10378

EC 01 0378 ED 019 770
Publ. Date 67 72p.
Martinson, Ruth A.; Seagoe, May V.
The Abilities of Young Children. CEC Research Monograph Series.
Council for Exceptional Children, Washington, D. C.
EDRS mf

In order to assess the quality of creative products in art, music, writing, social studies, and science, children attending grades 3 to 6 of the University Elementary School of the University of California, Los Angeles, were divided into two groups on the basis of intelligence. The higher group (49 pupils, IQ of 130 or more) and the low group (57 pupils, IQ of 120 or less) were similar in educational backgrounds, external environment, parental level of education, and sex ratio. Three independent judgments of each child's product in each subject were made by experts in the particular field represented. Criteria for creativity included originality and effectiveness of expression. In five out of the eight products evaluated, a significant relationship (p equals .05) was found between high IQ and high quality of judged product. Findings thus supported the hypothesis that giftedness and creativity are not antithetical. Both groups were also given Guilford and Hoepfner's test for divergent thinking. The only test which significantly separated the high from the low groups was the Association Test (t test, p equals .05) was found between high IQ and high quality of judged product. Findings thus supported the hypothesis that giftedness and creativity are not antithetical. Both groups were also given Guilford and Heopfner's test for divergent thinking. The only test which significantly separated the high from the low groups was the Association Test (t test, p equals .05). Since no significant differences were found between high and low IQ groups on the four remaining tests, a negligible relationship between intelligence and divergent thinking was indicated. Examples of the children's products in all areas and an 18-item reference list are included. The appendix contains biographical sketches of the judges. This document is available from The Council for Exceptional Children, NEA, 1201 Sixteenth Street, N.W., Washington, D.C. 20036, for $2.00. (JP)

ABSTRACT 12003

EC 01 2003 ED 030 989
Publ. Date June 62 36p.
Early Identification of the Gifted Through Interage Grouping.
Plainedge Public Schools, New York
New York State Education Department, Albany
EDRS mf, hc

To determine the advantages of interage grouping, 18 first graders (mean IQ 118.65) were assigned to two interage classes containing first, second, and third graders; 19 first graders (mean IQ 119.60) were assigned to two straight first grade classes. All children selected had been recommended by their kindergarten teachers as their brightest students. Both groups were given the Metropolitan Achievement Test, Primary I Battery in the fall and Primary II Battery in the spring. Students in the interage condition performed at a higher level on all achievement scales; group means were significant on word discrimination and arithmetic (p less than .01). Students selected as evidencing initial adjustment problems showed greater gains than their controls on all four scales. However, they achieved significantly lower scores on the California Test of Personality. The parents of children in both conditions responded favorably to questions concerning their children's reactions to school, their adjustment in and out of school, and their interest in reading. The parents of children in the interage program provided significantly higher ratings on the richness and variety of classroom experiences and the motivations provided to challenge the child to make use of his talents. The California Test of Personality revealed no significant differences in social adjustment of interage as opposed to straight grade classes.

ABSTRACT 20070

EC 02 0070 ED N.A.
Publ. Date Feb 67 10p.
Ringness, Thomas A.
Identification Patterns, Motivation, and School Achievement of Bright Junior High School Boys.
EDRS not available
Journal of Educational Psychology; V58 N2 P93-102 Feb 1967

Interview and card sort data were obtained on 261 high-, average-, and low-achieving bright 8th-grade boys in an attempt to confirm or refute earlier findings concerning identification patterns, motivation, and values. Confirmation was generally found, the main exception being that in the present study most subjects identified with fathers whereas in the previous study high achievers were most likely to do so. Socioeconomic sta-

tus bias may have influenced earlier data. Low achievers were found more motivated academically. Low achievers were more noncomforming, whereas high achievers were more independent. School was seen by most subjects as demanding conformity, and subjects accepted this role model. Scholarship was shown to have little relationship to peer popularity, and the perceived norm for school achievement was that of mediocrity. (Author)